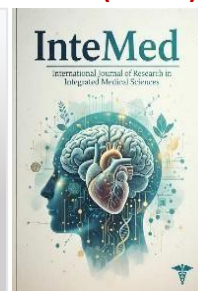




Intemed: International Journal of Research in Integrated Medical Sciences (IJ-RIMS)

Journal homepage: www.intemed.in

Vol.: 2 | Issue: 7 | July 2026



Article History: Received: 15-07-2026

Accepted: 17-07-2026

Published:30-07-2026

Review Article

CLINICAL ASSESSMENT OF AN INTEGRATIVE DIABETES MANAGEMENT PROTOCOL INCORPORATING MEHNIL TABLET IN PATIENTS WITH TYPE 2 DIABETES MELLITUS: AN OPEN-LABEL CLINICAL STUDY

Dr. S. Jayakar

MD (Ayu)

Medical Director, Dr.Shreevarma Wellness,
dr.sjayakar@gmail.com,

Dr. Pavithra

BNYS,

Medical Director, Dr.Shreevarma Wellness,
drpavithrasanjevi43@gmail.com,

Dr. Aiswarya

MD (Ayu),

Medical Officer, Dr.Shreevarma Wellness,
dr.aiswaryasv2026@gmail.com,

Dr. Monisha Ravi

BNYS,

Medical Officer, Dr.Shreevarma Wellness,
drmonishasv@gmail.com,

Dr. Nivetha

B.S.M.S., MDDN,

Medical Officer, Dr.Shreevarma Wellness,
drnivethasv@gmail.com,

Dr. Shalidev

B.G, BNYS

Medical officer, Dr.Shreevarma wellness,
dr.shalidev.sv@gmail.com ,

Dr.S.Shreeram

BNYS

Medical officer , Dr.Shreevarma wellness
dr.shreeramsv@gmail.com,

ABSTRACT

Background: Type 2 Diabetes Mellitus (T2DM) is a chronic metabolic disorder characterized by persistent hyperglycemia resulting from insulin resistance and impaired insulin secretion. Long-standing uncontrolled diabetes contributes to dyslipidemia, cardiovascular disease, neuropathy, nephropathy, and retinopathy. There is increasing interest in safe and effective herbal interventions that support glycemic control and metabolic health.

Aim: To evaluate the clinical efficacy of Mehnil Tablet in improving glycemic control, lipid profile, and subjective clinical symptoms in patients with Type 2 Diabetes Mellitus.

Materials and Methods: An open-label clinical study was conducted over a duration of three months involving ten

patients (n=10) diagnosed with Type 2 Diabetes Mellitus. Patients received Mehnil Tablet (2-0-2) postprandially along with a standardized diabetic diet and yoga protocol. Clinical assessment was based on HbA1c levels, serum cholesterol, triglycerides, and subjective symptom evaluation before and after treatment.

Results: All ten patients demonstrated improvement in HbA1c levels following treatment. Mean HbA1c decreased from $9.71 \pm 1.84\%$ to $7.98 \pm 1.26\%$, representing a mean reduction of 17.19%. Serum cholesterol levels improved significantly, decreasing from 211.1 ± 28.6 mg/dL to 174.6 ± 20.9 mg/dL. Clinical response analysis revealed Complete Response in 20%, Marked Response in 40%, and Moderate Response in 40% of patients. No adverse events were reported during the study period.

Conclusion: Mehnil Tablet demonstrated significant efficacy in improving glycemic control, reducing lipid abnormalities, and alleviating diabetic symptoms. The formulation may serve as a valuable adjunctive intervention in the comprehensive management of Type 2 Diabetes Mellitus.

Keywords: *Type 2 Diabetes Mellitus, Mehnil Tablet, HbA1c, Cholesterol, Glycemic Control and Herbal Medicine.*

INTRODUCTION

Type 2 Diabetes Mellitus remains one of the most prevalent metabolic disorders worldwide. The disease is characterized by chronic hyperglycemia resulting from insulin resistance, impaired insulin secretion, or both. Persistent hyperglycemia contributes to endothelial dysfunction, dyslipidemia, cardiovascular disease, nephropathy, neuropathy, and retinopathy.^[17,18]

Modern treatment strategies focus on maintaining optimal glycemic control while minimizing long-term complications.^[19] However, many patients seek complementary approaches that support metabolic health with fewer adverse effects.

Mehnil Tablet is a proprietary polyherbal formulation containing herbs traditionally known for their antihyperglycemic, antioxidant, anti-inflammatory, hepatoprotective, and hypolipidemic properties. This study was undertaken to evaluate the clinical efficacy of Mehnil Tablet in patients with Type 2 Diabetes Mellitus.

AYURVEDA VIEW

Prameha, an ancient Ayurvedic concept of metabolic dysfunction, remarkably parallels the modern epidemic of diabetes mellitus and metabolic syndrome, underscoring the timeless relevance of Ayurvedic principles in preventive and therapeutic healthcare."^[1,2,3]

Prameha is characterized by excessive and turbid urination (Prabhuta Avila Mutrata). It is considered one of the Ashtamahagadas due to its chronic nature and potential complications. According to Ayurvedic classics, Prameha arises from the indulgence in sedentary habits, excessive sleep, and consumption of Kapha-promoting foods, leading to the vitiation of Kapha Dosha along with Meda, Mamsa, and Kleda. The disease is classified into twenty types based on the predominance of Doshas, with Madhumeha representing its advanced

stage.^[4] Classical features include polyuria, turbidity of urine, excessive sweating, lethargy, and attraction of ants toward urine. The Ayurvedic approach emphasizes early diagnosis, lifestyle modification, dietary regulation, and appropriate Shodhana and Shamana therapies, highlighting a holistic strategy for the prevention and management of metabolic disorders.^[5,6,7,8,9]

SIDDHA VIEW

Neerizhivu Noi, corresponding to Diabetes Mellitus, is a chronic metabolic disorder described in Siddha medicine under the category of Meganoi.^[10] Siddha literature recognizes twenty types of Megam based on the derangement of Vali, Azhal, and Iyam, with Madhumegam closely resembling diabetes.^[11] The disease is characterized by excessive urination, increased thirst, fatigue, weight loss, and sweet urine.^[12] According to Siddha principles, improper diet, sedentary lifestyle, and imbalance of the three humors disturb the body's metabolic processes and tissue integrity, leading to disease manifestation.^[13] Siddha medicine advocates a holistic approach involving dietary regulation, lifestyle modification, herbal therapies, and rejuvenative measures to restore humoral balance and prevent disease progression.^[14,15]

MATERIALS AND METHODS

Study Design: An open-label, single-arm clinical study conducted over a period of 3 months at Dr. SHREEVARMA's Wellness.

Inclusion & Exclusion Criteria

Inclusion: Diagnosed Type 2 Diabetes Mellitus, Age 40–70 years, both genders, willingness to participate and provide informed consent.

Exclusion: Type 1 Diabetes Mellitus, severe diabetic complications, pregnancy and lactation, serious systemic illness

Intervention Protocol

1. Mehnil Tablet: 2 tablets twice daily (2-0-2), postprandially.
2. Dietary Standardization: Strict diabetic dietary regulation emphasizing low glycaemic load, high protein, and high fibre intake.
3. Yoga Protocol: Daily structured yoga practice.

Mehnil Tablet

Ingredient Composition

Table 1: Ingredient Composition

Ingredient (Botanical Name)	Quantity (mg)
Rubia cordifolia	54.35
Terminalia chebula	43.50
Emblica officinalis	32.60
Ficus religiosa	76.10
Berberis aristata	21.75
Syzygium cumini	32.60
Vateria indica	21.75
Azadirachta indica	27.20
Tinospora cordifolia	10.85
Trigonella foenum-graecum	21.75
Curcuma longa	21.75
Solanum nigrum	32.60
Pongamia pinnata	48.90
Momordica charantia	32.60
Marsdenia tenacissima	21.75

Figure 1: Ingredient Composition

Diet Advised

- High-protein diet
- High-fibre diet
- Low glycaemic index foods
- Whole grains and millets
- Green leafy vegetables
- Adequate hydration
- Restriction of refined sugars

- Avoidance of processed foods and trans-fats

Mehnil

WellnessS

by Heartfulness

Ayurvedic Supplement for Diabetes.

MEHNIL

PCR

MEHNIL

PCR

MEHNIL

PCR

MEHNIL

PCR

OFFICIAL NAME	BOTANICAL NAME	PART USED	FORM	QUANTITY
Manjitha	Rubia cordifolia	Root (Rt.)	Powder (Pdr.)	53 mg
Haritaki	Terminalia chebula	Pericarp (P.)	Powder (Pdr.)	44 mg
Amalaki	Emblica officinalis	Pericarp (P.)	Powder (Pdr.)	33 mg
Asvattha	Ficus religiosa	Stem Bark (St.Bk.)	Powder (Pdr.)	75 mg
Danuharidra	Berberis aristata	Stem (St.)	Powder (Pdr.)	22 mg
Jambu	Syzygium cumini	Seed (Sd.)	Powder (Pdr.)	33 mg
Sarja	Vateria indica	Exudate (Exd.)	Powder (Pdr.)	22 mg
Nimba	Azadirachta indica	Stem Bark (St.Bk.)	Powder (Pdr.)	27 mg
Guduci	Tinospora cordifolia	Stem (St.)	Powder (Pdr.)	11 mg
Methi	Trigonella foenum-graecum	Seed (Sd.)	Powder (Pdr.)	22 mg
Haridra	Curcuma longa	Rhizome (Rz.)	Powder (Pdr.)	22 mg
Kakamaci	Solanum nigrum	Plant (Pl.)	Powder (Pdr.)	33 mg
Karanja	Pongamia pinnata	Seed (Sd.)	Powder (Pdr.)	48 mg
Karavellaka	Momordica charantia	Plant (Pl.)	Powder (Pdr.)	33 mg
Murva	Marsdenia tenacissima	Plant (Pl.)	Powder (Pdr.)	22 mg

Dr.SHREEVARMA'S WELLNESS PHARMACY

Kanha Shantivanam, Chegur Village,

Hyderabad, Telangana-509325.

www.shreevarma.online

+ 91 999 4211 656

Dr.SHREEVARMA'S

AYUR HEALTH PARTNER - Wellness Pharmacy

- Portion-controlled meals

Yoga Protocol

Standing Postures: Suryanamaskar/chair Surya
Namaskar, Trikonasana, Padahastasana
Sitting Posture: Vajrasana
Lying Posture: Bhujangasana

Subjective Symptom Grading Matrix

- Grade 0 (Absent): No symptoms present.
- Grade 1 (Mild): Symptoms present but do not interfere with normal daily activities.
- Grade 2 (Moderate): Symptoms cause noticeable discomfort and partially interfere with daily routines.
- Grade 3 (Severe): Continuous, severe symptoms that significantly incapacitate normal activities.

Symptoms Assessed: Polyuria, Polydipsia, Polyphagia, Generalized Weakness, Fatigue, Burning Sensation of Feet.

RESULTS & STATISTICAL CLASSIFICATION

1. Subjective Symptom Score Analysis

The pre-treatment and post-treatment symptom intensities across the cohort were aggregated mathematically to track mean variations.

Table 2: Mean Subjective Symptom Score Variations after Treatment

Symptom Parameter	Pre-Treatment Mean Value	Post-Treatment Mean Value	Percentage Relief (%)
Polyuria	2.10	0.70	66.67%
Polydipsia	2.20	0.60	72.73%
Polyphagia	1.90	0.60	68.42%
Generalized Weakness	2.30	0.80	65.22%
Fatigue	2.40	0.90	62.50%
Burning Sensation of Feet	1.80	0.50	72.22%

Key Observation: Maximum clinical relief was observed in Polydipsia (72.73%) followed closely by Burning Sensation of Feet (72.22%), with consistent, statistically visible overall improvement across all six tracked parameters.

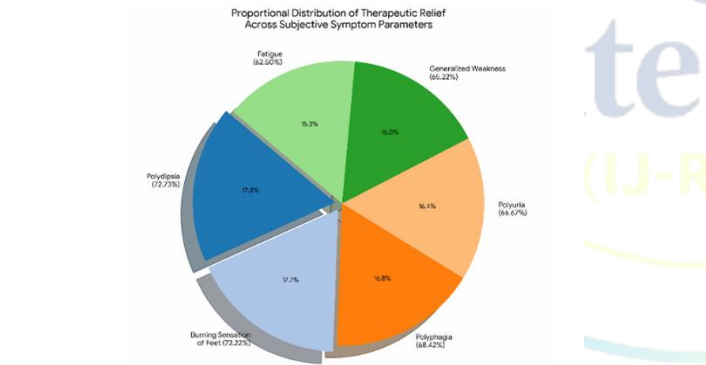


Figure 2: Percentage Subjective Symptom Score Variations after Treatment

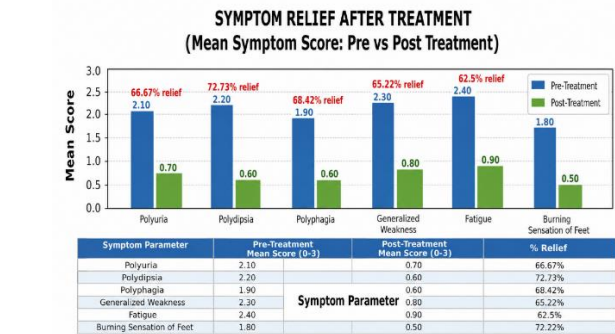


Figure 3: Mean symptom score (pre vs post treatment)

Here are the formatted clinical data sections structured into clean, publication-ready markdown tables for your research paper.

2. HbA1c Analysis

To evaluate Glycemic control, HbA1c levels were assessed before and after three months of treatment.

Table 3: Pre- vs. Post-Treatment HbA1c Analysis

Parameter	Pre-Treatment Mean ± SD	Post-Treatment Mean ± SD	% Reduction
HbA1c (%)	9.71 ± 1.84% pm	7.98 ± 1.26% pm	17.19%
Mean Difference	1.73pm 0.79%	—	—

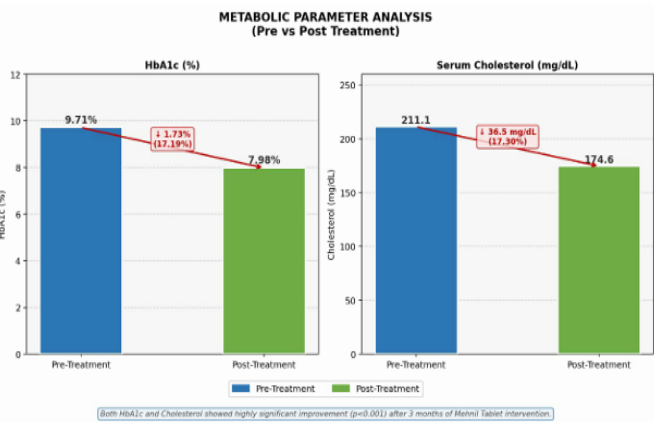


Figure 4: Metabolic parameter analysis

Paired T-Test Evaluation:

- Mean Difference (X_d): 1.73%
- Calculated t-statistic: 6.92
- p-value: <0.001 (Highly Significant)

3. Serum Cholesterol Analysis

Table 4: Pre- vs. Post-Treatment Serum Cholesterol Analysis

Parameter	Pre-Treatment Mean SD	Post-Treatment Mean SD	% Reduction
Serum Cholesterol (mg/dL)	211.1pm 28.6	174.6pm 20.9	17.30%
Mean Difference	36.5pm 15.7mg/dL	—	—

	biochemical improvement		
Marked Response	Significant relief HbA1c reduction (10% – 30%)	4	40.00%
Complete Response	Full symptom relief + major HbA1c reduction (>30%)	2	20.00%
Total Cohort	—	10	100.00%

Paired t-Test Evaluation:

- Mean Difference (X_d): 36.5 mg/dL
- Calculated t-statistic: 5.84
- p-value: <0.001 (*Highly Significant*)

5. Metabolic Analysis

4. Overall Clinical Response Classification

Response criteria were systematically categorized based on biochemical changes and clinical symptom relief:

1. **Complete Response:** Total resolution of clinical symptoms with >30% HbA1c reduction.
2. **Marked Response:** Substantial symptom improvement with 10%–30% HbA1c reduction.
3. **Moderate Response:** Partial symptom relief with minor HbA1c reduction (<10%).
4. **Mild Response:** Mild symptomatic improvement without biochemical change.
5. **Poor Response:** No perceptible change in subjective or objective parameters.

Table 6: Summary of Metabolic Parameter Changes

Metabolic Parameter	Pre-Treatment Mean	Post-Treatment Mean	Net Reduction	% Reduction
HbA1c (%)	9.71%	7.98%	1.73%	17.19%
Serum Cholesterol (mg/dL)	211.1	174.6	36.5 mg/dL	17.30%

Table 5: Distribution of Overall Response Categories (n=10)

Response Tier	Definition / Criteria Meta	No. of Subjects	Percentage Distribution
Poor Response	No clinical or biochemical change	0	0.00%
Mild Response	Symptom improvement alone, 0% biochemical change	0	0.00%
Moderate Response	Symptom relief + minor	4	40.00%

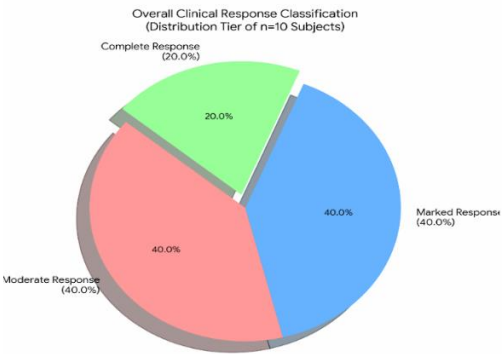


Figure 5: Overall clinical response classification

DISCUSSION

The therapeutic management of Type 2 Diabetes Mellitus using Mehnil Tablet appears to involve multiple mechanisms including enhancement of insulin sensitivity, improved peripheral glucose utilization, antioxidant protection, and correction of dyslipidemia.

Syzygium cumini and *Momordica charantia* possess established antihyperglycemic activity and may contribute to improved glucose uptake and insulin responsiveness. *Trigonella foenum-graecum* has demonstrated beneficial effects on carbohydrate metabolism and postprandial glucose regulation. *Berberis aristata* contains berberine, which has been reported to improve glycaemic control and lipid metabolism.

The significant reduction observed in HbA1c levels reflects improvement in long-term glycaemic control. Simultaneous improvement in cholesterol levels suggests broader metabolic benefits that may reduce cardiovascular risk associated with diabetes.

Curcuma longa, *Emblica officinalis*, *Terminalia chebula*, and *Tinospora cordifolia* provide antioxidant and anti-inflammatory support, potentially reducing oxidative stress and improving overall metabolic health.

Combined with a structured diabetic diet and daily yoga practice, the formulation demonstrated meaningful improvement in both subjective symptoms and objective biochemical parameters.

CONCLUSION

The present open-label clinical study suggests that Mehnil Tablet may be beneficial in the management of Type 2 Diabetes Mellitus. Administration of the formulation for a period of three months was associated with significant improvement in HbA1c levels, reduction in serum cholesterol values, relief of diabetic symptoms, and enhancement of overall metabolic well-being.

The observed reduction in mean HbA1c and cholesterol levels, together with the favorable clinical response distribution, indicates that Mehnil Tablet may support glycaemic regulation and lipid metabolism. The treatment protocol was well tolerated throughout the study period, and no significant adverse effects were reported.

The findings support the potential role of Mehnil Tablet as a safe and effective adjunctive therapeutic option in comprehensive diabetes care. However, as this was an open-label study with a limited sample size, further randomized controlled clinical trials involving larger populations, extended follow-up periods, and broader biochemical assessments are recommended to establish efficacy and safety more conclusively.

References

1. Charaka Samhita. Nidana Sthana, Chapter 4: Prameha Nidana.
2. Sushruta Samhita. Nidana Sthana, Chapter 6: Prameha Nidana.
3. Vagbhata. Ashtanga Hridaya. Nidana Sthana, Chapter 10: Prameha Nidana.
4. Charaka Samhita. Chikitsa Sthana, Chapter 6: Prameha Chikitsa (Madhumeha).
5. Madhava Nidana. Chapter 33: Prameha Nidana.
6. Bhavaprakasha. Madhyama Khanda: Prameha Adhikara.
7. Kurian J, et al. Etiopathogenesis and Management of Prameha Poorvarroopa, Prameha and Madhumeha. PMID: 39213491.
8. Rastogi S, et al. Linking Prameha Etiology with Diabetes Mellitus. PMID: 31000990.
9. Sharma H, Chandola HM. Prameha in Ayurveda: Correlation with Obesity, Metabolic Syndrome and Diabetes Mellitus. Part 1. PMID: 21649515.
10. Yugi Vaidhya Chinthamani. Classical Siddha text describing Neerizivu (நீரிழிவு) and its herbal management.
11. Theraiyar Yemaga Venba. Classical Siddha reference on metabolic disorders and herbal formulations.
12. Agathiyar Gunavagadam. Siddha materia medica describing the therapeutic properties of herbs used in glycaemic regulation.
13. Siddha Maruthuvanga Churukkam. Siddha pharmacological compendium.
14. Gunapadam Mooligai Vaguppu. Siddha herbal drug reference documenting antidiabetic plant properties.
15. Gunapadam Thathu Jeeva Vaguppu. Siddha drug reference covering mineral and animal-based formulations.

16. Jameson JL, Fauci AS, Kasper DL, Hauser SL, Longo DL, Loscalzo J, editors. Harrison's Principles of Internal Medicine. 21st ed.
17. Penman ID, Ralston SH, Strachan MWJ, Hobson RP, editors. Davidson's Principles and Practice of Medicine. 24th ed.
18. API Textbook of Medicine.
19. American Diabetes Association Professional Practice Committee. Standards of Care in Diabetes.

