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RESEARCH ARTICLE

AYURVEDIC MANAGEMENT OF MADHUMEHA (TYPE 2 DIABETES MELLITUS): A CASE REPORT

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Case Report; Fasting Blood Sugar; Madhumeha; Madhunashini Vati; Mehamudgar Vati; Type 2 Diabetes Mellitus

Abstract

Background: Madhumeha, a Vataja subtype of Prameha described in Ayurveda, is correlated with Type 2 Diabetes Mellitus (T2DM) on account of shared aetiological factors, clinical presentation, and progno sis. It commonly manifests as polyuria, nocturia, excessive thirst, dryne ss of mouth, and generalized weakness.

Clinical Findings: A 64-year-old male, a known case of T2DM for five years, presented with polyuria, nocturia, excessive thirst, dryness of mouth, and generalized weakness despite prior allopathic therapy. On Ayurvedic assessment he showed Kapha-Vata Prakriti and Dosha predominance, vitiation of Meda, Kleda and Rasa Dushya, Mandagni, and involvement of Mutravaha Srotas, confirming a diagnosis of Madhumeha. Baseline investigations revealed elevated fasting blood sugar (FBS) and post-prandial blood sugar (PPBS), with urine glucose beyond detectable limits.

Intervention: The patient received Madhunashini Vati Extra Power 500 mg (one tablet twice daily before meals) and Mehamudgar Vati 250 mg (one tablet twice daily after meals with 50 mL goat milk as Anupana) for 35 days, together with structured Pathya-Apathya (dietary and lifestyle regulation).

Outcome: FBS reduced from 132.4 mg/dL to 118.0 mg/dL and PPBS reduced from 162.0 mg/dL to 149.0 mg/dL over two follow-up visits (Day 20 and Day 36).Urine glucose became undetectable, and polyuria, nocturia, thirst, dry mouth and weakness all showed subjective improve ment, with no adverse effects reported.

Conclusion: This case suggests that a structured Ayurvedic protocol combining Madhunashini Vati Extra Power and Mehamudgar Vati with goat milk Anupana and dietary regulation may improve glycaemic parameters and

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symptomatology in Madhumeha (T2DM) within a short duration. Controlled studies with larger samples and longer follow-up are warranted to confirm these findings.

Introduction:-

Diabetes Mellitus is a chronic metabolic disorder characterised by persistent hyperglycaemia arising from impaired insulin secretion, insulin resistance, or both, and remains among the leading non-communicable disease burdens worldwide.[1] Global estimates project a rise in diabetes prevalence from 537 million cases in 2021 to 783 million by 2045.[17] In India, the ICMR-INDIAB-17 national cross-sectional study reported an overall diabetes prevalence of 11.4% and a prediabetes prevalence of 15.3% among adults, with the country accounting for the second-highest number of people with T2DM globally.[17],[18] This rising burden, together with long-term micro- and macrovascular complications, underscores the need for effective and sustainable management strategies.

In Ayurveda, T2DM is correlated with Madhumeha, a Vataja subtype of Prameha arising from vitiation of Kapha, Meda and Kleda under the influence of Kapha-aggravating dietary and lifestyle factors, and is characterised by Prabhoota Mutrata (polyuria) and Varam-Varam Mehati (frequent micturition).[2] While conventional management is largely centred on pharmacological glycaemic control, Ayurveda offers a holistic approach through herbal formulations, Pathya-Apathya (dietary regulation) and lifestyle modification aimed at correcting the underlying Doshic and Dhatu-level derangement rather than glycaemia alone.[2,3]

This case is notable because the patient, who had shown only partial symptomatic relief after five years of conventional oral hypoglycaemic therapy (Metformin and Glimepiride) and transient benefit from unspecified prior Ayurvedic remedies, achieved measurable improvement in both symptoms and glycaemic parameters — FBS, PPBS and urine glucose — within a comparatively short course of 35 days using a well-defined, reproducible combination of two classical/proprietary formulations (Madhunashini Vati Extra Power and Mehamudgar Vati) administered with goat milk Anupana, a specific Yoga-Anupana combination described in Bhaishajya Ratnavali that is infrequently documented in the recent case-report literature.

Case Report:-

Clinical Findings:-

Patient Information:-

- Age/Sex: 64 years/Male
- Occupation: Retired
- Residence: Uttarakhand, India
- Known case of Type 2 Diabetes Mellitus for 5 years

Chief Complaints:-

- Excessive urination during daytime
- Increased frequency of urination during night-time (nocturia)
- Excessive thirst (Polydipsia)
- Dryness of mouth
- Generalized weakness

History of Present Illness:-

The patient was apparently healthy five years prior to presentation. He gradually developed excessive daytime urination that progressed to nocturia, accompanied by excessive thirst, dryness of mouth, and generalized weakness. Investigations at an allopathic hospital confirmed T2DM, for which he was started on Metformin 500 mg and Glimepiride 2 mg; symptomatic relief was partial and unsatisfactory. He additionally used unspecified Ayurvedic herbal preparations with only transient benefit. In September 2025 he presented to the Kayachikitsa OPD, Patanjali Yogpeeth, for Ayurvedic management.

Past and Personal History:-

- Past history: Known case of T2DM for 5 years; no significant surgical history.
- Diet: Mixed; Appetite: Normal; Bowel: Regular
- Sleep: Disturbed due to nocturia
- Micturition: Increased frequency

General and Systemic Examination:-

Vitals and General Examination:-

At the time of presentation, the patient's pulse rate was 78 bpm, blood pressure was 126/82 mmHg, respiratory rate was 18 cycles/ min, and temperature was 98.1°F. The patient's BMI was recorded as 24.7kg/m2. On general examination, there was no clinical evidence of pallor, icterus, cyanosis, clubbing, lymphadenopathy, or pedal oedema.

Systemic Examination:-

- **Cardiovascular System (CVS): S_1, S_2 normal,** no added murmurs.
- **Respiratory System (RS) :** B/L air entry equal, normal vesicular breath sounds.
- **Per Abdomen (P/A) :** Soft, non tender , no organomegaly detected.
- **Central Nervous System (CNS) :** Conscious, oriented to time, place and person**.**

Ayurvedic Clinical Examination (Ashtavidha Pariksha-based assessment):-

- Prakriti: Kapha-Vata
- Dosha: Kapha-Vata predominance
- Dushya: Meda, Kleda, Rasa
- Agni: Mandagni
- Srotas involved: Mutravaha Srotas
- Diagnosis: Madhumeha (Vataja Prameha)

Timeline of Events:-

Date	Event
~2020 (5 years prior to presentation)	Onset of daytime polyuria, gradually progressing to nocturia, excessive thirst, dry mouth, and generalized weakness
2020	First clinical consultation; diagnosed with Type 2 Diabetes Mellitus; started on Metformin 500 mg and Glimepiride 2 mg
2020–2025	Continued allopathic treatment with partial symptomatic relief; also used unspecified Ayurvedic medications with transient benefit
September 2025	Presented to Kayachikitsa OPD, Patanjali Yogpeeth, for Ayurvedic management
27-09-2025	Baseline investigations performed and Ayurvedic treatment initiated (FBS 132.4 mg/dL, PPBS 162.0 mg/dL, urine glucose beyond detectable limits)
17-10-2025	First follow-up (Day 20): improvement in glycaemic parameters (FBS 129.0 mg/dL, PPBS 157.0 mg/dL)
02-11-2025	Second follow-up (Day 36): further improvement in symptoms and laboratory values (FBS 118.0 mg/dL, PPBS 149.0 mg/dL); treatment course of 35 days completed
Post-treatment	Significant clinical improvement; patient clinically stable, symptomatic improvement sustained

Diagnosis and Differential Diagnosis:-

A diagnosis of Madhumeha (correlated with Type 2 Diabetes Mellitus) was established based on classical Ayurvedic clinical features (Prabhoota Mutrata, Kapha-Vata Doshic predominance, Meda-Kleda Dushya vitiation) corroborated by biochemical evidence of hyperglycaemia and glycosuria. The following differentials were considered and excluded on clinical and biochemical grounds:

Differential Diagnosis	Distinguishing Feature	Reason for Exclusion in This Case
Type 1 Diabetes Mellitus	Younger age of onset, acute presentation, ketosis-prone	Age 64 yrs, insidious 5-year course, no ketosis, retained response to oral agents
Diabetes Insipidus	Polyuria with dilute urine, normal blood glucose	Documented hyperglycaemia (FBS/PPBS elevated) and glycosuria
Renal Glycosuria	Glycosuria with normal blood glucose	Elevated FBS and PPBS accompanied the glycosuria
Secondary diabetes (e.g., steroid- or pancreatitis-induced)	History of causative drug intake/pancreatic disease	No history of corticosteroid use or pancreatic illness
Other Prameha subtypes (Pittaja/Kaphaja Prameha)	Differing Doshic predominance and symptomatology	Clinical picture consistent with Vataja Prameha (Madhumeha): chronicity, Vata-Kapha predominance, Dhatukshaya features

Intervention:-
The patient was managed with Shamana Chikitsa using two proprietary Ayurvedic formulations administered with a specific Anupana, along with structured Pathya-Apathya (dietary and lifestyle regulation) for 35 days (27-09-2025 to 01-11-2025). No Shodhana (bio-purificatory) procedure was administered in this case.

Medicines Administered:-

Medicine	Dose	Anupana	Duration
Madhunashini Vati Extra Power 500 mg	1 tablet twice daily, before meals	Warm water	35 days (27-09-2025 to 01-11-2025)
Mehamudgar Vati 250 mg	1 tablet twice daily, after meals	Goat milk, 50 mL	35 days (27-09-2025 to 01-11-2025)

Concurrent Medications:-
The patient was managed with the above Ayurvedic protocol as monotherapy during the study period. His earlier allopathic oral hypoglycaemic agents (Metformin 500 mg and Glimepiride 2 mg) were discontinued by the patient themselves approximately 8 days prior to presentation (in September 2025)without formal medical supervision, before initiating the regimen.

Pathya (Dietary and Lifestyle Advice):-
- Avoidance of sugar
- Controlled carbohydrate intake
- Adequate hydration
- Timely meals
- Regular physical activity

Apathya (Restrictions):-
- Sugar and sweets
- Wheat flour
- Rice
- Potatoes
- Sedentary lifestyle
- Daytime sleeping

Follow-up and Outcome:-
The patient was assessed at baseline (27-09-2025), first follow-up (17-10-2025, Day 20) and second follow-up (02-11-2025, Day 36/end of treatment).

Adherence and Tolerance:-

Adherence to the prescribed medication and Pathya-Apathya was assessed through patient self-report and verbal confirmation during follow-up visit. The patient reported full compliance with both formulations and dietary advice. Tolerance to the medicines was assessed clinically through direct questioning for gastrointestinal or other complaints at each visit; the treatment was well tolerated throughout the course. No adverse effects were reported or observed during the 35-day treatment period.

Change in Clinical Symptoms:-

Parameter	Before Treatment	After Treatment
Daytime urinary frequency	Present	Reduced
Nocturia	Present	Reduced
Thirst	Excessive	Decreased
Dryness of mouth	Present	Improved
Weakness	Present	Reduced
Quality of life	Impaired	Improved

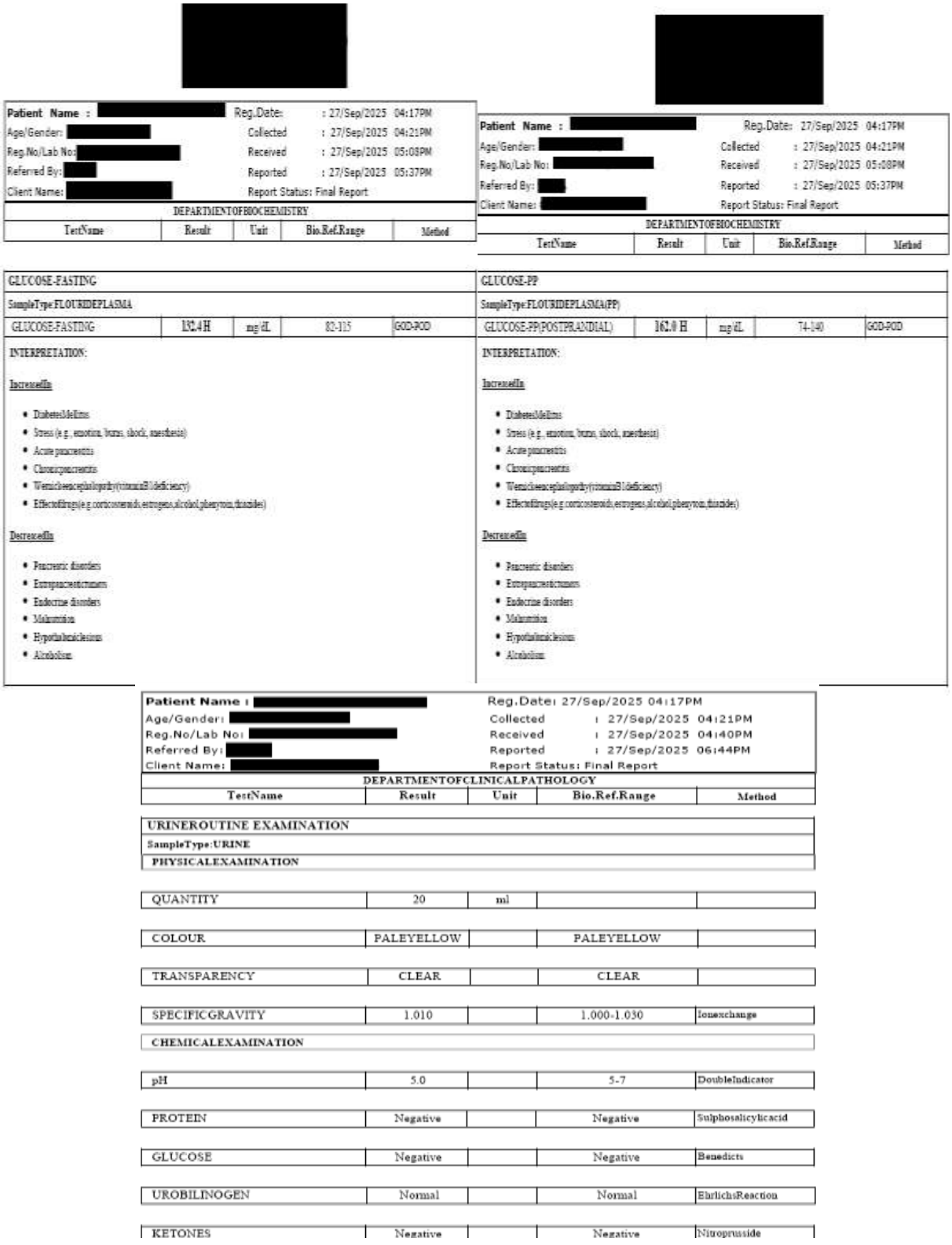
Objective (Laboratory) Outcome:-

Parameter	Baseline (27-09-2025)	Follow-up 1 (17-10-2025)	Follow-up 2 / Post-treatment (02-11-2025)
Fasting Blood Sugar (mg/dL)	132.4	129.0	118.0
Post-Prandial Blood Sugar (mg/dL)	162.0	157.0	149.0
Urine Glucose	Beyond detectable limits	Beyond detectable limits	Undetectable

Results:-

This case did not involve radiological or sonographic investigations (USG, X-ray, MRI or Doppler); consequently, no before-treatment/after-treatment imaging is presented. The principal objective outcomes are the serial fasting and post-prandial blood glucose and urine glucose values summarised in the tables above (Section 2.3), which show a consistent downward trend in glycaemic parameters across the two follow-up visits.

Baseline (27-09-2025):-



Patient Name : [redacted] Reg.Date: : 27/Sep/2025 04:17PM
Age/Gender: [redacted] Collected : 27/Sep/2025 04:21PM
Reg.No/Lab No: [redacted] Received : 27/Sep/2025 05:08PM
Referred By: [redacted] Reported : 27/Sep/2025 05:37PM
Client Name: [redacted] Report Status: Final Report

DEPARTMENTOFBIOCHEMISTRY

TestName	Result	Unit	Bio.Ref.Range	Method
GLUCOSE-FASTING				
SampleType:FLOURIDEPLASMA				
GLUCOSE-FASTING	132.4 H	mg/dL	82-115	GOD-POD

INTERPRETATION:

Increasedin

- DiabetesMellitus
- Stress (e.g., emotion, burns, shock, anesthesia)
- Acute pancreatitis
- Chronicpancreatitis
- Wernicheencephalopathy(vitamineB1deficiency)
- Effectoffrugs(e.g.corticosteroids,estrogens,alcohol,phenytoin,thiazides)

Decreasedin

- Pancreatic disorders
- Extrapancreatictumors
- Endocrine disorders
- Malnutrition
- Hypothalamiclesions
- Alcoholism

Patient Name : [redacted] Reg.Date: 27/Sep/2025 04:17PM
Age/Gender: [redacted] Collected : 27/Sep/2025 04:21PM
Reg.No/Lab No: [redacted] Received : 27/Sep/2025 05:08PM
Referred By: [redacted] Reported : 27/Sep/2025 05:37PM
Client Name: [redacted] Report Status: Final Report

DEPARTMENTOFBIOCHEMISTRY

TestName	Result	Unit	Bio.Ref.Range	Method
GLUCOSE-PP				
SampleType:FLOURIDEPLASMA(PP)				
GLUCOSE-PP(POSTPRANDIAL)	162.0 H	mg/dL	74-140	GOD-POD

INTERPRETATION:

Increasedin

- DiabetesMellitus
- Stress (e.g., emotion, burns, shock, anesthesia)
- Acute pancreatitis
- Chronicpancreatitis
- Wernicheencephalopathy(vitamineB1deficiency)
- Effectoffrugs(e.g.corticosteroids,estrogens,alcohol,phenytoin,thiazides)

Decreasedin

- Pancreatic disorders
- Extrapancreatictumors
- Endocrine disorders
- Malnutrition
- Hypothalamiclesions
- Alcoholism

Patient Name : [redacted] Reg.Date: 27/Sep/2025 04:17PM
Age/Gender: [redacted] Collected : 27/Sep/2025 04:21PM
Reg.No/Lab No: [redacted] Received : 27/Sep/2025 04:40PM
Referred By: [redacted] Reported : 27/Sep/2025 06:44PM
Client Name: [redacted] Report Status: Final Report

DEPARTMENTOFCLINICALPATHOLOGY

TestName	Result	Unit	Bio.Ref.Range	Method
URINEROUTINE EXAMINATION				
SampleType:URINE				
PHYSICALEXAMINATION				
QUANTITY	20	ml		
COLOUR	PALEYELLOW		PALEYELLOW	
TRANSPARENCY	CLEAR		CLEAR	
SPECIFICGRAVITY	1.010		1.000-1.030	Ionexchange
CHEMICALEXAMINATION				
pH	5.0		5-7	DoubleIndicator
PROTEIN	Negative		Negative	Sulphosalicylicacid
GLUCOSE	Negative		Negative	Benedicts
UROBILINOGEN	Normal		Normal	EhrlichsReaction
KETONES	Negative		Negative	Nitroprusside

Figure1: Scanned laboratory reports

Follow up 1.(17-10-2025):-

[redacted]

Patient Name : [redacted] Reg.Date: 17/ Oct /2025 11:42AM
Age/Gender: [redacted] Collected : 17/ Oct /2025 12:21PM
Reg.No/Lab No: [redacted] Received : 17/ Oct /2025 03:20PM
Referred By: [redacted] Reported : 17/ Oct /2025 06:43PM
Client Name: [redacted] Report Status: Final Report

DEPARTMENTOFBIOCHEMISTRY

TestName	Result	Unit	Bio.Ref.Range	Method
GLUCOSE-FASTING				
SampleType:FLOURIDEPLASMA				
GLUCOSE-FASTING	129 H	mg/dL	82-115	GOD-POD

INTERPRETATION:

Increasedin

- Diabetes Mellitus
- Stress (e.g., exercise, burns, shock, anesthesia)
- Acute pancreatitis
- Chronic pancreatitis
- Werniceencephalopathy(vitamin B1deficiency)
- Effectofdrugs(e.g.corticosteroids,estrogens,alcohol,phenytoin,diuretics)

Decreasedin

- Pancreatic disorders
- Extrapancreatictumors
- Endocrine disorders
- Malnutrition
- Hyperinsulinemia
- Alcoholism

Patient Name : [redacted] Reg.Date: 17/ Oct /2025 11:42AM
Age/Gender: [redacted] Collected : 17/ Oct /2025 12:21PM
Reg.No/Lab No: [redacted] Received : 17/ Oct /2025 03:20PM
Referred By: [redacted] Reported :17/ Oct /2025 06:43PM
Client Name: [redacted] Report Status: Final Report

DEPARTMENTOFBIOCHEMISTRY

TestName	Result	Unit	Bio.Ref.Range	Method
GLUCOSE-PP				
SampleType:FLOURIDEPLASMA(PP)				
GLUCOSE-PP(POSTPRANDIAL)	157.0 H	mg/dL	74-140	GOD-POD

INTERPRETATION:

Increasedin

- Diabetes Mellitus
- Stress (e.g., exercise, burns, shock, anesthesia)
- Acute pancreatitis
- Chronic pancreatitis
- Werniceencephalopathy(vitamin B1deficiency)
- Effectofdrugs(e.g.corticosteroids,estrogens,alcohol,phenytoin,diuretics)

Decreasedin

- Pancreatic disorders
- Extrapancreatictumors
- Endocrine disorders
- Malnutrition
- Hyperinsulinemia
- Alcoholism

[redacted]

Patient Name : [redacted] Reg.Date: 17/ Oct /2025 11:42AM
Age/Gender: [redacted] Collected : 17/ Oct /2025 12:21PM
Reg.No/Lab No: [redacted] Received : 17/ Oct /2025 03:20PM
Referred By: [redacted] Reported : 17/Oct/2025 06:43PM
Client Name: [redacted] Report Status: Final Report

DEPARTMENTOFCLINICALPATHOLOGY

TestName	Result	Unit	Bio.Ref.Range	Method
URINEROUTINE EXAMINATION				
SampleType:URINE				
PHYSICALEXAMINATION				
QUANTITY	20	ml		
COLOUR	PALEYELLOW		PALEYELLOW	
TRANSPARENCY	CLEAR		CLEAR	
SPECIFICGRAVITY	1.010		1.000-1.030	Ionexchange
CHEMICALEXAMINATION				
pH	5.0		5-7	DoubleIndicator
PROTEIN	Negative		Negative	Sulphosalicylicacid
GLUCOSE	Negative		Negative	Benedicts
UROBILINOGEN	Normal		Normal	EhrlichsReaction

Figure2: Scanned laboratory reports

Post Treatment (02-11-2025):-

Figure 3: Scanned laboratory reports

Discussion:-

Madhumeha is described as a Vataja subtype of Prameha involving progressive derangement of Kapha, Meda and Kleda, and is widely correlated with T2DM in contemporary Ayurvedic clinical practice.[2] In the present case, the combination of Madhunashini Vati Extra Power and Mehamudgar Vati (administered with goat milk Anupana) alongside strict Pathya-Apathya produced a measurable reduction in FBS (132.4→118.0 mg/dL) and PPBS (162.0→149.0 mg/dL) over 35 days (Table, Section 2.3), together with resolution of urine glycosuria and improvement in polyuria, nocturia, thirst, and weakness.

Comparable outcomes have been reported in other recent Ayurvedic case reports of Madhumeha/T2DM. Boruah and Adiga described symptomatic and glycaemic improvement in a 50-year-old male managed with Madhumehari Churna, Ojaswani Churna, Chandraprabha Vati and Phaltrikadi Kwath Basti.[19] Similarly, an integrated Ayurveda protocol combining internal medication, Panchakarma and Yoga was reported to achieve good glycaemic control while avoiding the vitamin B12 deficiency, hypoglycaemia and cardiovascular risks associated with certain pharmacological agents.[20] These reports, together with the present case, support a broader pattern of Kapha-Medohara/Prameha-Hara formulations producing clinically meaningful glycaemic benefit, although cross-study comparison remains limited by differing formulations, doses and follow-up durations.

Probable Mode of Action:-

Madhunashini Vati Extra Power contains several herbs with documented antihyperglycaemic activity. Haridra (Curcuma longa) improves glycaemic control and protects pancreatic β-cells through curcumin's antihyperglycaemic action.[4] Kutki (Picrorhiza kurroa) exhibits antidiabetic and hepatoprotective effects and lowers elevated fasting glucose.[5] Chirayata (Swertia chirayita) possesses antihyperglycaemic and immunomodulatory activity.[6] Gudmar (Gymnema sylvestre) is well documented for reducing urinary glucose and improving lipid parameters.[7] Additional ingredients — Jamun[8], Karela[9], Gokshura[10], Methi[11], Haritaki[12], Amalaki[13] and Guduchi[14] — contribute further antidiabetic, antioxidant and hepatoprotective actions.

Mehamudgar Vati, described in Bhaishajya Ratnavali for Madhumeha, is understood to act at the level of Medodhatvagni through its Medohara properties.[15] Its constituents — Amalaki, Shunthi, Maricha and Dadima — contribute antioxidant effects, while Lauha Bhasma, Haritaki, Amalaki and Pippali exert Rasayana action that may reduce oxidative stress, improve insulin sensitivity and protect pancreatic β-cells. Lauha Bhasma, Guggulu, Maricha and Devadaru exhibit Medohara action, and Guggulu, Haritaki, Amalaki and Shunthi show hypolipidaemic activity supporting overall metabolic balance.[15] The use of goat milk as Anupana, per Bhaishajya Ratnavali, is itself reported to improve glucose homeostasis and pancreatic β-cell function, potentially augmenting the effect of Mehamudgar Vati.[16,21]Strict dietary restriction of sugar, wheat flour, rice and potatoes likely reduced overall glycaemic load and reinforced the pharmacological effect of both formulations[22].

Limitations:-

This is a single-patient case report without a comparator arm, blood HbA1c estimation, or long-term follow-up beyond 35 days, and glycaemic changes cannot be fully dissociated from the concurrent dietary and lifestyle modification; the findings therefore require confirmation through controlled clinical studies with larger sample sizes.

Conclusion:-

This case of chronic (5-year-duration) Madhumeha (Type 2 Diabetes Mellitus) was managed with Shamana Chikitsa — Madhunashini Vati Extra Power 500 mg and Mehamudgar Vati 250 mg with goat milk Anupana — together with structured Pathya-Apathya, over a 35-day treatment course (27-09-2025 to 01-11-2025) with two interval follow-ups (Day 20 and Day 36). No Shodhana or Yoga-based intervention was used. No adverse effects were observed during the treatment or follow-up period. Key findings were a reduction in FBS (132.4→118.0 mg/dL) and PPBS (162.0→149.0 mg/dL), resolution of glycosuria, and subjective improvement in polyuria, nocturia, thirst, dry mouth, weakness and overall quality of life. No incidental findings were noted during the course of management. This case adds to the emerging evidence base for classical/proprietary Ayurvedic Prameha-Hara formulations combined with dietary regulation as an adjunct or alternative approach in Madhumeha, while underscoring the need for larger, controlled studies with longer follow-up to establish long-term efficacy and safety.

Summary:-

This case report presents the Ayurvedic management of a 64-year-old male with Type 2 Diabetes Mellitus (Madhumeha) who had persistent symptoms despite conventional treatment. He was treated with Madhunashini Vati Extra Power, Mehamudgar Vati with goat milk as Anupana, and appropriate dietary and lifestyle modifications for 35 days. The treatment resulted in a reduction in fasting blood sugar (132.4 to 118.0 mg/dL) and postprandial blood sugar (162.0 to 149.0 mg/dL), with urine glucose becoming undetectable. The patient also experienced significant relief from excessive urination, thirst, dry mouth, and weakness, without any adverse effects. Although the findings are promising, this single case highlights the need for larger controlled studies to confirm the effectiveness of this Ayurvedic treatment approach.

Patient's Perspective:-

The patient reported significant relief from excessive urination, excessive thirst, dryness of mouth, and weakness, and expressed satisfaction with the treatment outcome, describing an improvement in his overall well-being and daily functioning.

Declaration of Patient Consent:-

The authors confirm that they have obtained a patient consent form in which the patient has granted permission for the publication of this case, including accompanying clinical details, in the journal. The patient acknowledges that his name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard his identity; however, complete anonymity cannot be assured.

Conflicts of Interest:-

The authors declare no conflicts of interest.

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