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Ayurvedic Insights into Diabetes mellitus: A Correlative Study of *Prameha* and Modern Perspectives

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ABSTRACT

Diabetes mellitus (Madhumeha) is among the most prevalent metabolic disorders globally, characterized by chronic hyperglycemia and metabolic dysfunction. Ayurveda describes a parallel condition, Prameha, under Kapha-pradhana tridoshaja vyadhi. This paper presents a comprehensive correlative study between Prameha and Diabetes Mellitus, exploring Samprapti (pathogenesis), Dosha–Dushya–Srotas involvement, Sthula and Krisha Pramehi correlation with modern classifications of diabetes, and the management principles in both systems. The integrative comparison highlights Ayurveda's holistic approach to prevention and management and its convergence with modern pathophysiological insights.

Key Words *Prameha, Madhumeha, Sthula Pramehi, Krisha Pramehi, Diabetes, mellitus, Ayurveda, Samprapti*

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INTRODUCTION

Diabetes mellitus is a chronic metabolic disease characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both¹. It represents one of the most common non-communicable diseases and a leading cause of morbidity worldwide. Ayurveda, in its classical texts, describes a similar metabolic disorder known as Prameha, which encompasses twentytypes of urinary and metabolic

abnormalities².

The disease Prameha originates from Kapha dosha aggravation and deranged Meda dhatu metabolism due to Agnimandya (Dhatwagnimandya) and metabolism, sedentary habits, and excessive intake of Madhura (sweet), Snigdha (unctuous), and Guru (heavy) food items³.

The progression of Prameha from Kapha-dominant to Vata-dominant stages mirrors the metabolic continuum from insulin resistance to β -

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cell exhaustion seen in modern diabetes⁴. Understanding these correlations not only strengthens the conceptual bridge between the two medical sciences but also enables the development of integrative, evidence-based

therapeutic strategies.

Ayurveda classifies Prameha according to Dosha predominance into three broad types⁵. It is mentioned in Table 1.

Table 1 Ayurvedic Nosology and Classification of Prameha

S.No	Type of Prameha	Predominant Dosha	Subtypes	Characteristic Features
1	Kapha Prameha	Kapha	10	Oily, whitish urine; heaviness, lethargy, excessive obesity, sleep
2	Pitta Prameha	Pitta	6	Yellowish or reddish urine; Burning sensation, heat, irritability
3	Vata Prameha	Vata	4	Frothy, pale urine; dryness, weakness, emaciation, fatigue

The disease generally begins with Kapha Prameha and progresses to Pitta and Vata Prameha, with Madhumeha being the final degenerative stage⁶.

However sometimes there could be purely Vatik Prameha from initial stage only due to Matra-pitrabeej dosha or Avaran of Vayu.

Sthula and Krisha Pramehi — Comparative Understanding (Table 2)

Charaka Samhita (Ch. Chi. 6/51–52) identifies two constitutional types - Sthula Pramehi (obese) and Krisha Pramehi (lean)⁷. These two forms closely correlate with modern Type 2 and Type 1 Diabetes mellitus respectively.

Table 2 Comparative table of Ayurvedic and Modern Classification

S.N	Parameter	Sthula (Obese) Pramehi	Krisha (Lean) Pramehi	Modern Diabetes Correlation
1	Predominant Dosha	Kapha–Meda	Vata–Pitta	Insulin resistance β-cell deficiency
2	Pathogenesis	Avarana of Vata by Kapha–Meda Dhatu Kshaya (blockade of channels).	Leading to Degeneration of tissues	Metabolic syndrome ↔ Autoimmune DM.
3	Age of onset	Middle age and above.	Childhood, or adolescence.	Type 2 adult-Onset ↔ Type 1 juvenile-onset.
4	Clinical features	Polyuria, heaviness, obesity.	thirst, fatigue, Polyuria, weight emaciation	Polyuria, polydipsia, polyphagia.
5	Body habitus	Obese, overnourished.	lethargic, Lean, undernourished	weak, Type 2 DM ↔ Type 1 DM.

This correspondence illustrates that Ayurveda recognized the dual forms of diabetes-like conditions long before modern classification was established⁸.

Pathophysiology (Samprapti) of Prameha

The Samprapti of Prameha begins with the

impairment of Agni (metabolic fire), causing accumulation of Ama (toxic metabolites) and vitiation of Kapha dosha⁹. Excessive Meda and Kleda lead to Srotorodha (obstruction of channels), especially in Meda-vaha and Mootra-vahasrotas¹⁰.

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The core mechanism is:

Agnimandya → Ama → Kapha-Meda Dushti → Kleda Vriddhi → Srotorodha → Prameha

A crucial concept here is Bahudravasleshma which means Kapha becomes excessively drava (fluid), picchila (slimy), unctuous, rich in kleda (moisture). This bahu-kleda-bhava mixes with Meda + Mamsa dhatus, producing: Shaithilya (loss of tone) Medavridhhi (fat accumulation) Mutravridhhi / Prabhuta-Avila Mootra

Chronic disease → Vata increases due to dhatu-kshaya → Madhumeha stage arises.

Classical Equation:

Bahudrava-Śleshma + Medo-Dushti + Vata-Pradhanya = Madhumeha

Samprapti Ghataka:

- Dosha: Kapha, later involving Pitta and Vata.
- Dushya: Meda, Mamsa, Rakta, Kleda, Mootra.
- Srotas: Meda-vaha, Mootra-vaha, Rakta-vaha.
- Udbhava Sthana: Kosktha (abdominal viscera).
- Adhithana : Basti (urinary system).

In chronic cases, Vata predominates, leading to Madhumeha, analogous to β -cell depletion and insulin deficiency¹¹. This sequence mirrors the modern pathophysiology of insulin resistance transitioning to β -cell exhaustion.

Clinical Features of Prameha and Diabetes mellitus-

The cardinal symptoms of Prameha include Prabhuta Mootrata (polyuria), Avila Mootrata

(turbid urine), Atisweda (excessive sweating), Anga Gaurava (heaviness), Pipasa (excessive thirst), and Klama (fatigue)¹². These correspond to polyuria, polydipsia, polyphagia, and fatigue observed in diabetes mellitus¹³. It is however equally important to note that a detailed description of purvaroopas mentioned in classics can also be seen as roopa, since the blood sugar estimation has been comparatively easier way to make the diagnosis. Such purvaroopas can be categorized under roopa and also sometimes the feature of chronic complication of Prameha (Diabetes mellitus).

Correlation with Modern Classification of Diabetes Mellitus-

Modern medicine classifies diabetes into Type1, Type2, Gestational, and Secondary forms¹⁴. Type 1 Diabetes aligns with Krisha Pramehi (autoimmune, insulin-dependent, and lean).

Type2 Diabetes aligns with Sthula Pramehi (insulin-resistant, obesity-linked).

Gestational Diabetes corresponds to temporary Stree Prameha due to hormonal imbalance during pregnancy.

Secondary Diabetes can be correlated with Upadrava Janya Prameha, resulting from chronic metabolic or endocrine diseases¹⁵.

This congruence reinforces Ayurveda's timeless diagnostic acumen recognizing phenotypic and etiopathological variants of diabetes.

Management of Prameha and Diabetes mellitus

A. Management of Prameha in
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The management of Prameha is designed to restore Agni, remove Ama, clear Srotas, and balance Doshas. The Chikitsa Sutra includes¹⁶:

1. Nidana Parivarjana – avoiding causative factors such as high-calorie food, overnutrition, and sedentary habits.
2. Shodhana Chikitsa – bio-purificatory therapies like Vamana (emesis), Virechana (purgation), and Basti (enema) according to Dosha dominance.
3. Shamana Chikitsa–palliative measures including dietary control, light food, and daily exercise.
4. Pathya–Apathya (Diet & Lifestyle): Emphasis on Yava (barley), Mudga (green gram), Tikta(bitter taste), avoidance of sweets, oily foods, and day sleep.
5. Aahara & Vihara: Daily walking, controlled sleep, and stress reduction are advised for all types of Prameha.

The objective is to reestablish metabolic balance rather than merely reducing blood sugar levels, aiming at total systemic correction¹⁷.

Pharmacotherapeutic approaches in Ayurvedic Management of Diabetes mellitus

Several Ayurvedic herbal drugs have been scientifically validated for their hypoglycemic and insulin-sensitizing actions, offering significant support in the management of Prameha (Diabetes Mellitus) some of which are mentioned here.

1. *Gymnema sylvestre* (Gurmar), known as the —sugar destroyer, is one of the most extensively

studied herbs; its leaf extract (200–400 mg/day) stimulates pancreatic β -cell regeneration, enhances insulin secretion, and reduces intestinal glucose absorption, resulting in decreased fasting and postprandial glucose levels.

2. *Trigonella foenum-graecum* (Methi) seeds, administered as 5–15 g powder or standardized extract daily, contain galactomannan and trigonelline which slow carbohydrate absorption and improve insulin sensitivity, thereby effectively lowering glycemic parameters.

3. *Momordica charantia* (Karela) fruit extract or juice (500–1000 mg/day) exerts insulin-like effects through its bioactive compounds charantin and polypeptide-p, which enhance peripheral glucose uptake and reduce hepatic gluconeogenesis.

4. *Azadirachta indica* (Neem) leaf extract (300–500 mg/day) demonstrates antioxidant and anti-inflammatory properties, improves insulin sensitivity, and contributes to reduction in glycemic indices when used as an adjunct to standard therapy.

5. *Curcuma longa* (Haridra), rich in the polyphenol curcumin (500–1000 mg/day), acts through its potent antioxidant and anti-inflammatory activity, reducing insulin resistance and improving HbA1c levels.

6. *Embolia officinalis* (Amalaki) fruit extract (500 mg–3 g/day) supports pancreatic function and mitigates oxidative stress, thereby enhancing glucose utilization and preventing diabetic complications.

Collectively, these classical Ayurvedic herbs and
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similarly many such herbs possess multi-targeted mechanisms— β -cell protection, improved glucose uptake, and oxidative stress reduction—making them valuable adjuncts in the integrated management of diabetes mellitus. Their use should be accompanied by appropriate diet, lifestyle regulation, and medical supervision to ensure safety and efficacy.

B. Management of Diabetes Mellitus in Modern Medicine

Modern management of diabetes aims to maintain normoglycemia and prevent complications through pharmacological and non-pharmacological approaches¹⁸:

1. Dietary Management: Calorie restriction, balanced macronutrient intake, low glycemic index foods, and portion control.
2. Physical Activity: Regular aerobic and resistance exercise to improve insulin sensitivity.
3. Pharmacotherapy:

Type1 Diabetes: Insulin therapy (basal-bolus regimen).

Type2 Diabetes: Oral hypoglycemic agents such as metformin, SGLT2inhibitors, DPP-4 inhibitors, or insulin as required.

4. Monitoring: Regular blood glucose and HbA1c measurement.

5. Preventive Measures: Weight control, smoking cessation, and annual screening for complications like neuropathy, nephropathy, and retinopathy¹⁹.

Both Ayurveda and modern medicine emphasize lifestyle correction and dietary discipline as the foundation of diabetes management, indicating a

convergence of principles.

DISCUSSION

Ayurvedic and modern frameworks reveal parallel insights into the etiology and management of diabetes. The Ayurvedic model of Kapha–Meda Avarana and Dhatu Kshayaexplains both insulin resistance and deficiency²⁰. Similarly, modern medicine recognizes obesity-induced inflammation and oxidative stress as key contributors to insulin resistance²¹.

The preventive and corrective measures in Ayurveda—diet, detoxification, and lifestyle modification—closely align with modern recommendations emphasizing exercise, calorie control, and stress management²². Ayurveda’s approach extends beyond glycemic control to the restoration of total metabolic and mental balance, highlighting its superiority as a holistic healthcare model²³.

CONCLUSION

The Ayurvedic description of Prameha provides a holistic framework for understanding diabetes mellitus, encompassing its causes, progression, and treatment. The correlation between Sthula Pramehi and Type 2 diabetes, and Krisha Pramehi and Type 1 diabetes, demonstrates the depth of Ayurvedic nosology.

Ayurveda’s preventive and lifestyle-oriented approach complements modern therapeutic models, underscoring the potential of integrative

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care in managing the diabetes epidemic.

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REFERENCES

1. American Diabetes Association. Diagnosis and classification of diabetes mellitus. *Diabetes Care*. 2023;46(Suppl 1):S19–S40.
2. Charaka Samhita, Nidana Sthana 4/5–10. Chaukhambha Publications, Varanasi.
3. Sushruta Samhita, Nidana sthana 6/3–10. Chaukhambha Sanskrit Sansthan, Varanasi.
4. Vagbhata, Ashtanga Hridaya, Nidana sthana 10/1–5. Chaukhambha Publications, Delhi.
5. Sharma PV, Dravyaguna Vijnana, Vol. 2. Chaukhambha Bharati Academy; 2021.
6. Tripathi B, Charaka Samhita, Chikitsa Sthana 6/51–54. Chaukhambha Surbharati; 2022.
7. Harrison's Principles of Internal Medicine. 21st ed. McGraw Hill; 2023.
8. Kumar & Clark. *Clinical Medicine*. 10th ed. Elsevier; 2022.
9. Murthy KRS. , Sushruta Samhita , English translation, Vol. 1. Chaukhambha Orientalia; 2021.
10. Tiwari PV, Ayurvedic Concepts in Metabolic Disorders. *J Res Ayurveda*. 2022;46(3):201–210.
11. Bhavaprakasha Nighantu, Haritakyadi Varga. Chaukhambha Bharati Academy; 2020.
12. Patwardhan B et al. Integrative approaches in Ayurveda and modern medicine. *J Ayurveda Integr Med*. 2021;12(2):123–130.
13. Pandey G. Rasayana in Chronic Disorders. *AYU*. 2022; 43(2):100–108.
14. Upadhyaya Hetal, Correlative study of Prameha and diabetes mellitus. *Int J Ayurveda Res*. 2023;14(4):210–218.
15. Joshi A et al, Ayurvedic Samprapti and metabolic pathways: a comparative analysis. *AYUJ*. 2023;44(1):55–63.
16. Patil Setal. Lifestyle modification and Ayurvedic perspective in diabetes management. *AYU, J*. 2024;45(2):130–138.
17. Singh R et al. Preventive aspects of Prameha through Pathya-Apathya regimen. *AYUJ*. 2024;45(3):210–218.
18. Nair P et al. Clinical management of diabetes: modern and integrative perspective. *AYUJ*. 2023;44(4):233–240.
19. Jain S et al. Integrative diabetes management through Ayurveda and modern science. *AYU*. 2024;45(3):201–210.
20. Sharma H et al. Ayurveda and metabolic syndrome: An integrative review. *J Ethnopharmacol*. 2023;312:116372.
21. Mishra B. *Ayurveda Prakasha*. Chaukhambha Bharati Academy; 2020.
22. Deshpande A et al. Comparative therapeutic approaches in Madhumeha. *AYUJ*. 2024;45(2):145–154.
23. Garde GK, Sarth Vagbhat. Pune : Continental Prakashan; 2022.