Case Report

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MULTIFACETED APPROACH OF AYURVEDA IN MANAGEMENT OF CHRONIC DIABETES MELLITUS: A CASE REPORT

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ABSTRACT

Background: Diabetes Mellitus is a chronic metabolic disorder with multifactorial etiology and increasing prevalence worldwide. In Ayurveda, Type 2 Diabetes Mellitus can be correlated with Madhumeha, a subtype of Prameha, particularly Avarana-janya Madhumeha. Case Presentation: A 47-year-old male patient, apparently healthy one year earlier, was incidentally detected with hyperglycemia during routine investigations. Subsequently, he developed polyuria, polydipsia, polyphagia, fatigability, exertional dyspnea, excessive sleepiness, and burning sensation with numbness in bilateral palms and soles. Diagnosis and Management: Based on clinical features and laboratory investigations, the condition was diagnosed as Avarana-janya Madhumeha, correlating with Type 2 Diabetes Mellitus. The patient was managed with Ayurvedic interventions including Shodana and Shamana therapies. Virechana Karma was administered, followed by internal medications such as Madhumeha Kusumakara Rasa, Shilapravanga with gold, Arogyavardhini Vati, Asanadi Kashaya, and Panchatiktaka Kashaya, along with Nidana Parivarjana and lifestyle modifications. Outcome: post-treatment, the patient showed improvement in glycemic parameters and reduction in associated clinical symptoms during the follow-up period. Conclusion: This case indicates the potential role of a structured Ayurvedic treatment protocol in the management of Avarana-janya Madhumeha.

Keywords: Diabetes Mellitus, Avarana-janya Madhumeha, Virechana Karma, Madhumeha Kusumakara Rasa.

INTRODUCTION

Diabetes Mellitus (DM) is a chronic metabolic disorder characterized by persistent hyperglycemia due to impaired insulin secretion, insulin action, or both. The global prevalence of DM has increased rapidly because of urbanization, sedentary lifestyle, unhealthy dietary habits, and obesity, leading to a significant burden on healthcare systems. Type 2 Diabetes Mellitus (T2DM) is closely associated with insulin resistance and commonly coexists with metabolic syndrome, which includes central obesity, dyslipidemia, hypertension, and impaired glucose regulation. In Ayurveda, DM closely resembles Madhumeha, one of the twenty types of Prameha described in classical texts. All forms of Prameha, if inadequately treated, are said to progress to Madhumeha, highlighting its chronic and grave nature. Acharya Sushruta classifies Prameha into Sahaja Prameha and Apathya-nimittaja Prameha[1], the latter showing close similarity to T2DM in terms of etiology, clinical features, and disease progression. Due to its severity and complications, Madhumeha has been described as a Mahagada in Ayurvedic literature. Madhumeha is a Tridoshaja disorder with predominance of Kapha Dosha, Dushyas such as Meda, Mamsa, Kleda, Rasa, Rakta, Majja, and Ojas.[2] The disease manifests through deranged Agni, abnormal Meda metabolism, Avarana, and subsequent Dhatukshaya, ultimately leading to depletion of Ojas. Acharya Charaka refers to Madhumeha as Ojomeha, emphasizing the role of impaired immunity and vitality in its pathogenesis. Prodromal features include excessive coating of teeth and tongue, burning sensation in palms and soles, excessive thirst, and fatigue, followed by cardinal symptoms such as Prabhuta Mutrata, Avila Mutrata, Karapada Daha, and Shrama. In the present era, sedentary lifestyle, excessive intake of calorie-dense foods, and lack of physical activity are major etiological factors contributing to Apathya-nimittaja Madhumeha. Ayurvedic management focuses on Rukshana, Agni deepana, Kaphamedo shoshana, Ojovardhana, along with strict dietary and lifestyle modifications. The present case study aims to demonstrate the Ayurvedic approach and therapeutic outcome in a patient of Apathya-nimittaja Madhumeha, highlighting the relevance of classical principles in contemporary metabolic disorders.

CASE REPORT

A 47-year-old male patient was apparently healthy one year prior to presentation. Nine months ago, he developed severe toothache for which he consulted a dentist and was advised tooth extraction. Routine laboratory investigations conducted at that time incidentally revealed elevated blood glucose levels. Subsequently, the patient gradually developed symptoms suggestive of hyperglycemia, including increased frequency of micturition (polyuria), excessive thirst (polydipsia), increased appetite (polyphagia), burning sensation in bilateral palms and soles, exertional dyspnea, easy fatigability, excessive sleepiness, and numbness over bilateral palms and soles. With the progression of these symptoms, the patient presented to the Kayachikitsa OPD of Sri Kalabyraveshwara Swamy Ayurvedic Medical College Hospital and Research center, Vijayanagar, Bangalore on 08/03/2025 (OPD No. M9242). Based on detailed clinical evaluation, symptomatology, and laboratory investigations, the patient was diagnosed with Madhumeha, correlating with Type 2 Diabetes Mellitus.

Table 1: General Examination

Parameters	Findings
Built	Endomorph
Nourishment	Well nourished
Appearance	Comfortable
Decubitus	Sitting
Pallor	Absent
Icterus	Absent
Cyanosis	Absent
Clubbing	Absent
Edema	Absent
Lymphadenopathy	Absent
Height	177cm
Weight	95 kgs
BMI	30

Table 2: Systemic Examination

Systems	Findings
CNS	Conscious, well oriented to time, place, person
CVS	S1 S2 heard
RS	Chest bilaterally symmetrical, NVBS heard, No added sounds
P/A	Umbilicus centrally placed, soft, Non- Tender, No organomegaly.

Nidana Panchaka

Nidana

Aharaja Ksheera, Guda, Dadhi, Madhura Rasa Pradhana ahara, Snigdha ahara, Atiashana

Viharaja Avyayama

Manasika Chinta

Anya Hetu Beeja dusthi

Poorva roopa Shayanasheela, Swapna Sheela, Ghanangata, Asyamadhuryata

Roopa Prabhuta Mutrata, Karapada daha, Karapadasuptata, Pipasadhikya, Bahuashi

Upashaya Avoiding ksheera, Guda, Dadhi, Madhura Rasa Pradhana ahara

Anupashaya Avyayama, Chinta

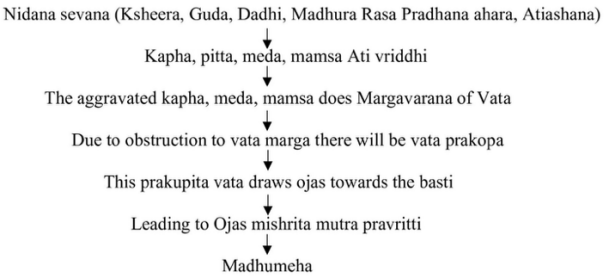

Figure 1: Avaranajanya Madhumeha Samprapti[3]

Table 3: Investigations

Parameters	Values (7/3/2025)
FBS	240 mg/dl
PPBS	352 mg/dl
FUS	++
PPUS	+++
HbA1C	11.1%
Total Cholesterol	210mg/dl
LDL	78mg/dl
HDL	42mg/dl
Serum Triglycerides	200mg/dl

The patient was diagnosed as a case of Avaranajanya Madumeha and treatment was planned accordingly. Patient was not on any Hypoglycemic medications; he was prescribed with Ayurvedic medications and was advised to follow strict diet and life style modifications.

Table 4: Treatment timeline

8/3/25 to 15/3/25	1.Tab. Arogyavardhini rasa 2BD AF 2.Tab. Shilapravang with Gold 1BD AF 3. Asanadi Kashaya + Mahatiktaka kashaya 6 tsp with water BD AF
16/3/25 to 22/3/25	1.Sarvanga Udvartana with Triphala choorna+ Yava choorna+ Kolakulatadi Choorna was administered for 7 days. 2.Shiro Takradhara with Musta+ Amalaki kwatha was administered for 7 days.
23/3/25 to 25 /3/25	Snehapana with Kalyanaka Ghrita + Sukumara Ghrita was administered for 3 days.
26 /3/25 to 28/3/25	Vishrama kala - Sarvanga Abhyanga with Asanadi Taila Followed by Sarvanga Bashpa Sweda for 3 days.
29/3/25	Virechana with Trivrut lehya – 75 gm
1/4/25 to 3/4/25	Samsarjana Krama – 5 days
4/4/25 to 6/5/25	1.Madhumeha Kusumakara rasa 1BD AF 2.Tab. Arogyavardhini rasa 2BD AF 3.Tab. Shilapravang with Gold 1BD AF 4. Asanadi Kashaya + Panchatiktaka kashaya 6tsp with water BD AF

RESULTS

There was remarkable reduction in symptoms like polyuria, polydipsia, polyphagia, burning sensation in bilateral palms and soles, exertional dyspnea, easy fatigability and numbness over bilateral palms and soles. There was mild reduction in excessive sleepiness.

The Hba1C levels had reduced from 11.1 % to 6.1 %, and reduction in weight was noted after Virechana (91 kgs.)

Table 5: Changes in Glycemic parameters and Lipid profile

Parameters	Before treatment (7/3/2025)	After treatment (28/4/25)
FBS	240 mg/dl	126mg/dl
PPBS	352 mg/dl	192 mg/dl
FUS	++	Traces
PPUS	+++	1%
HbA1C	11.1%	6.1% (Repeated after 3 months)
Total Cholesterol	210mg/dl	180mg/dl
LDL	78mg/dl	74mg/dl
HDL	42mg/dl	40mg/dl
Serum Triglycerides	200mg/dl	120mg/dl

DISCUSSION

Madhumeha is defined as a disease in which the urine resembles honey in color, taste, smell, and consistency. Acharya Charaka describes Madhumeha as a condition where urine possesses Kashaya and Madhura rasa, Ruksha guna, and Pandu varna,[4] while Acharya Sushruta refers to it as Kshaudra Meha, emphasizing the honey-like sweetness of urine. [5] Acharya Vagbhata corroborates Charaka's description and further states that sweetness is not limited to urine alone but manifests throughout the body, indicating systemic involvement.[6] These descriptions closely parallel the clinical features of Type 2 Diabetes Mellitus, where hyperglycemia leads to glycosuria, polyuria, polydipsia, and multisystem involvement. Acharya Sushruta classifies the etiological factors of Prameha into Sahaja and Apathya-nimittaja. Sahaja Madhumeha arises due to defects in Beeja, Beejabhaga, or Beejabhagavayava, inherited from parents, and may also result from improper maternal conduct during Garbha-avastha, thereby being considered a Kulaja vikara. Apathya-nimittaja Prameha results from improper dietary and lifestyle habits leading to Santarpanajanya or Sthula Prameha.[1] Acharya Charaka vividly explains that individuals indulging in excessive food intake, sedentary habits, lack of physical activity, and unctuous diets are predisposed to Prameha, emphasizing the pivotal role of Nidana sevana in disease manifestation.[7] The Samprapti of Prameha has been elaborately described by both Charaka and Sushruta. According to Charaka, indulgence in etiological factors leads to Sharira shaithilya due to Bahudrava Kapha prakopa. This aggravated Kapha combines with Meda, resulting in Vikruta Meda, which further associates with Atipramana Kleda and Mamsa vrddhi, ultimately causing Kleda dusti and Prabhuta Mutrata.[8] Improper management of Kaphaja Prameha eventually leads to Vataja Prameha, which is considered Asadhya. Sushruta explains that vitiated Vata, Pitta, and Kapha along with Meda move through Mutravaha srotas, localize at Basti Mukha, and are excreted through urine.[9] If, untreated, all forms of Prameha progress to Madhumeha. Additionally, two distinct pathogenic mechanisms- Avaranajanya and Dhatukshayajanya Madhumeha are described.[6] In Avaranajanya Madhumeha, excessive aggravation of Kapha, Pitta, Meda, and Mamsa obstructs the normal movement of Vata, leading to Avarana-janya Vata prakopa. The aggravated Vata draws Ojas towards the Basti, resulting in its excretion through urine. In Dhatukshayajanya Madhumeha, excessive Vata prakopa due to improper diet and lifestyle causes depletion of vital tissues, and the vitiated Vata carries Ojas along with Vasa, Majja, and Lasika to the Basti. Due to the Ruksha guna of Vata, the Madhura rasa of Ojas is converted into Kashaya rasa and excreted through urine.

Mode of Action of Rukshana Karma

In Madhumeha, the disease pathogenesis is dominated by bahudrava shleshma, which circulates throughout the body and leads to dhatu shaitilyata. Rukhshana in the form of Udvartana with Triphala, Yava, Kolakulatadi choorna and Takradhara counteracts this excessive dravata by absorbing kleda and reducing Kapha. By alleviating bahudrava shleshma, Rukhshana improves tissue firmness. Additionally, Rukshana facilitates the removal of Avarana caused by Kapha and Meda over Vata, thereby normalizing the gati of Vata. Thus, Rukshana acts as a primary therapeutic measure in Madhumeha by addressing both Kapha-Meda dusthi and Avaranajanya Vata prakopa at the initial stage of management.

Mode of Action of Virechana karma

Acharya Vagbhata states that the objective of Samshodana Chikitsa in Prameha is the Prashamana of Kleda and Meda.[10] In conditions of Bahudoshavastha and in individuals who are Balavan, Shodana is preferred to eliminate accumulated Doshas rather than merely pacifying them. Excess Kleda and vitiated Meda play a key role in the pathogenesis of Prameha by causing Srotodusthi and Agni mandya. Virechana Karma with Trivrut lehya was selected as the primary Shodana modality to eliminate accumulated Doshas, reduce Avarana, and facilitate restoration of normal Vata gati.

Mode of action of Madhumeha kusumakara rasa

MKR contains ingredients of Vasanth kusumakara rasa with Mamajjaka ghana, Haridra, Amalaki, Guduchi, Shuddha shilajatu, Yashada Bhasma processed in Bilva patra swarasa and Asana twak kwatha. Vasanthakusumakara rasa is mentioned as Pramehaghna, Rasayana, Ojovardhaka. The formulation primarily addresses Kapha-Meda dusthi and Kleda, which are key factors in the pathogenesis of Madhumeha. Ingredients such as Shilajatu and Guduchi are traditionally indicated in Prameha for metabolic correction, while Haridra and Amalaki support antioxidant balance. Yashada bhasma is described in Ayurvedic literature for its role in Prameha management. Processing with Bilva and Asana enhances the formulation's action on Meda dusthi and Prabhuta mutrata.

Mode of action of Arogya vardhini rasa

Arogyavardhini Vati possesses Dipana, Pacana, and Lekhana properties, which help correct Agnimandya and reduce Ama in Prameha. Ingredients such as Triphala, Shilajatu, and Kuṭaki reduce Kleda and Meda, while Guggulu helps remove Vata avaraṇa and clears obstructed Srotas. Tamra Bhasma supports carbohydrate metabolism and glucose transport. Kuṭaki enhances insulin-mediated glucose uptake, and Triphala contributes to glycemic regulation and reduction of oxidative stress.[11]

Mode of action of Shilajatu and other ingredients with gold

Shilapravanga Rasa contains Shuddha shilajatu, Pravala Bhasma, vanga Bhasma, Suvarnamakshika Bhasma, Guduchi satva, Ashwagandha, Shatavari, Gokshura, Bala, Amalaki, Akarakarabha, Jatiphala, Karpoora, Latakasturibeeja, Kraunchabeeja, Mkaradwaja Bhasma, Suvarna Bhasma, Mouktika pisthi, with Shilajatu as its principal ingredient, possesses Ushna, Katu-Tikta rasa and Chedaniya and Medoghna properties, which aid in counteracting Bahu-drava Shleṣma and clearing obstructed Srotas. Its antioxidant potential and metabolic regulatory action support correction of Avaraṇa at the level of Meda and Maṃsa, contributing to improved metabolic homeostasis. Oxidative stress is recognized as an important contributing factor in the pathogenesis of Madhumeha, leading to insulin resistance, pancreatic β-cell dysfunction, and progressive tissue damage. Shilajatu, a key constituent of Shilapravang Rasa, is reported to possess a high ORAC score, indicating significant antioxidant potential. This antioxidant activity may help in neutralizing reactive oxygen species, thereby reducing oxidative stress associated with chronic hyperglycemia. Through this mechanism, Shilajatu may contribute to the preservation of cellular integrity and metabolic balance.

Mode of action of Asanadi kashaya

Asanadi Kashaya, described in Ashtanga Hridaya as Pramehahara and Medodoshahara,[12] Its Lekhana and Kledashoshana actions aid in reducing Prabhuta Mutrata, the Kashaya-Tikta rasa and Laghu-Ruksha guna of Asanadi Kashaya help in alleviating Kapha Meda dusthi and bahudrava shleshma, addressing the core pathology of Madhumeha and improving peripheral glucose utilization. The constituent drugs possess hypoglycemic, hypolipidemic and antioxidant properties, attributed to bioactive compounds such as polyphenols, flavonoids, terpenoids, alkaloids and glycosides. These constituents may enhance insulin secretion, improve insulin sensitivity and exert insulin-like

activity, thereby aiding glucose utilization and glycemic control. Additionally, inhibition of intestinal glucose absorption and reduction of oxidative stress contribute to improved glucose homeostasis.[13]

CONCLUSION

Madhumeha is a chronic metabolic disorder requiring a multidimensional treatment approach. The Present management, based on Shodana followed by Shamana chikitsa, aimed at Kleda and meda prashamana, Agni Deepana and Srotoshodhana. The selected formulations supported metabolic correction, glycemic control and associated complications such as neuropathic symptoms. This approach highlights the relevance of classical Ayurvedic principles in the integrative management of Madhumeha further systematic studies are required to substantiate these observations.

Ethical Consideration: The case study was conducted as per ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants.

Informed Consent: The authors certify that they have obtained appropriate patient consent form. In the consent form the patient has given his consent for his clinical information to be reported in the journal.

REFERENCES

1. Acharya, N. R. (Ed.). (2023). Sushruta Samhita with commentaries: Nibandhasangraha of Dalhanacharya. Chaukhamba Orientalia. (Chikitsasthana, Chapter 11, Verse 3, p. 451)
2. Acharya, T. Y. (Ed.). (2023). Charaka Samhita, revised by Charaka and Drdhabala, with Ayurveda Dipika commentary of Chakrapani Datta. Chaukhamba Orientalia. (Nidanasthana, Chapter 4, Verse 7, p. 212)
3. Acharya, T. Y. (Ed.). (2023). Charaka Samhita, revised by Charaka and Drdhabala, with Ayurveda Dipika commentary of Chakrapani Datta. Chaukhamba Orientalia. (Sutrasthana, Chapter 17, Verses 78–80, p. 103)
4. Acharya, T. Y. (Ed.). (2023). Charaka Samhita, revised by Charaka and Drdhabala, with Ayurveda Dipika commentary of Chakrapani Datta. Chaukhamba Orientalia. (Nidanasthana, Chapter 4, Verse 44, p. 215)
5. Acharya, N. R. (Ed.). (2023). Sushruta Samhita with commentaries: Nibandhasangraha of Dalhanacharya and Nyayacandrika Panjika of Gayadasacharya. Chaukhamba Orientalia. (Nidanasthana, Chapter 6, Verse 12, p. 291)
6. Paradakara, H. S. (Ed.). (2023). Ashtanga Hridaya with commentaries: Sarvangasundara of Arunadatta and Ayurveda Rasayana of Hemadri. Chaukhamba Orientalia. (Nidanasthana, Chapter 10, Verse 18, p. 504)
7. Acharya, T. Y. (Ed.). (2023). Charaka Samhita, revised by Charaka and Drdhabala, with Ayurveda Dipika commentary of Chakrapani Datta. Chaukhamba Orientalia. (Nidanasthana, Chapter 4, Verse 5, p. 212)
8. Acharya, T. Y. (Ed.). (2023). Charaka Samhita, revised by Caraka and Drdhabala, with Ayurveda Dipika commentary of Chakrapani Datta. Chaukhamba Orientalia. (Nidanasthana, Chapter 4, Verse 8, p. 213)
9. Acharya, N. R. (Ed.). (2023). Sushruta Samhita with commentaries: Nibandhasangraha of Dalhanacharya. Chaukhambha Orientalia. (Nidanasthana, Chapter 6, Verse 4, p. 289)
10. Paradakara, H. S. (Ed.). (2023). Ashtanga Hridaya with commentaries: Sarvangasundara of Arunadatta and Ayurveda Rasayana of Hemadri. Chaukhamba Orientalia. (Cikitsasthana, Chapter 12, Verse 1, p. 678)
11. Mane PN, Digambar DG, Ugale PP, Shekhar A. *et al*. Study of add-on effect of Madhusudan Vati and Arogyavardhini Vati in Prameha with special reference to Type 2 Diabetes Mellitus. International Journal of Ayurvedic Medicine [serial on the Internet]. 2023 [cited 2025 Nov 25];14(2):362–368. Available from: https://doi.org/10.47552/ijam.v14i2.3302
12. Paradakara, H. S. (Ed.). (2023). Ashtanga Hridaya with commentaries: Sarvangasundara of Arunadatta and Ayurveda Rasayana of Hemadri. Chaukhamba Orientalia. (Sutrasthana, Chapter 15, Verses 19–20, p. 236)
13. Gupta V, Biyani R, Tiwari CK, Sharma NH & Murthy MVS. A review on antidiabetic action of Asanadi Gana. International Journal of Research in Ayurveda and Pharmacy [serial on the Internet]. 2013 [cited 2025 Nov 25];4(5):638–643. Available from: http://dx.doi.org/10.7897/2277-4343.04502

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