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Ayurvedic Herbs in the Management of *Prameha* (Diabetes Mellitus)

Dr. Naresh Kumar regar[1], Dr. Ashwini kumar sharma[2]

1. M.D. Scholar, Department of *Drvyaguna* Vigyan, M.M.M.Govt. *Ayurved* college, Udaipur
2. Professor, department of *Drvyaguna* Vigyan, M.M.M Govt. *Ayurved* College, Udaipur.

Abstract

The prevalence of lifestyle diseases, particularly in the era of fast food and junk food, is on the rise. One such health issue is *Prameha*, which closely resembles diabetes mellitus. Prameha is extensively described in *Ayurvedic* texts, starting with the *Vedas*, and is thoroughly discussed in the three primary *Ayurvedic* texts known as *Bruha-trayi*: *Charaka Samhita*, *Sushruta Samhita*, and *Vagbhatta Samhita*. The pathogenesis of *Prameha* involves ten *Dushya*, with *Kapha* being the primary dosha involved. The core principle of treatment is to counteract *Kapha dosha* through various regimens, medications, and diets that target *medas* (fat tissue). In contrast to modern medicine, which often requires lifelong medication and insulin injections, *Ayurved* focuses on rejuvenating the body to control blood sugar levels and prevent complications. The COVID-19 pandemic has exacerbated the prevalence of diabetes and heart disease due to increased fear and anxiety. *Ayurvedic* treatment for *Madhumeha* (diabetes) involves a holistic approach, including lifestyle changes, proper medication, and a balanced diet, to ensure a healthy and active life. Diabetes Mellitus is a common non-communicable disease in India, characterized by chronic hyperglycemia and disturbances in carbohydrate, fat, and protein metabolism. In *Ayurved*, it is known as *Madhumeha*, a type of *Vataj Prameha* where the patient passes honey-like sweet urine. The main causative factors include a sedentary lifestyle, excessive intake of dairy products, sweets, non-vegetarian foods, jaggery, and heavy meals. *Ayurved* advocates a conservative approach to managing *Madhumeha* through diet, exercise, and medication. Herbs such as *Shilajit, Khadir, Lodhra, Guduchi*, and *Jambu* have proven effective in controlling *Madhumeha*. This review highlights the *Ayurvedic* perspective on managing *Prameha* and the potential of *Ayurvedic* herbs in treating this condition.

Keywords: *Prameha*,Diabetes Mellitus,*Madhumeha, Ayurvedic* Herbs, hyperglycemia

Introduction

Diabetes Mellitus, a complex metabolic disorder marked by chronic high blood sugar levels, involves disruptions in the metabolism of carbohydrates, fats, and proteins.[i] Traditional *Ayurvedic* remedies for diabetes, known as *Madhumeha*, are among the earliest therapies documented. *Prameha* refers to a collection of urinary disorders, especially those characterized by excessive urination with various abnormal attributes due to *dosha* imbalances. In *Madhumeha*, the urine appears sweet and honey-like. This disorder is of two main types: one due to *Vata* aggravation resulting from tissue depletion (*Dhatukshya*) and the other due to *Kapha* and fat tissue obstruction *(Meda Avarana*) combined with aggravated *Vata*.[ii]

Ayurvedic scriptures, including the *Vedas* and the foundational texts known as *Bruha-trayi* (*Charaka Samhita, Sushruta Samhita*, and *Vagbhatta Samhita*), provide extensive details on *Prameha*. The disease's progression involves ten specific bodily tissues, with *Kapha* being the primary contributing *dosha*. Treatment principles focus on mitigating *Kapha* through various therapeutic regimens, medications, and dietary adjustments targeting fat tissue.While modern medical approaches to diabetes often necessitate continuous medication and insulin injections, *Ayurved* emphasizes body rejuvenation to manage blood sugar levels and prevent complications. [iii]The COVID-19 pandemic has notably accelerated the incidence of diabetes and cardiovascular diseases due to increased stress and anxiety. *Ayurvedic* management of *Madhumeha* incorporates comprehensive lifestyle changes, appropriate medications, and dietary plans to promote overall well-being.

Diabetes Mellitus, prevalent in India, is akin to *Madhumeha in Ayurved* and is characterized by persistent high blood sugar levels and metabolic disturbances. Major contributing factors include inactive lifestyles, excessive consumption of dairy, sweets, non-vegetarian foods, jaggery, and heavy meals. *Ayurvedic* management advocates a conservative approach using diet, exercise, and medicinal herbs. *Shilajit, Khadir, Lodhra, Guduchi*, and *Jambu* are among the herbs known for their effectiveness in controlling *Madhumeha*.

Aims and Objectives

- To establish that *Madhumeha* is both a metabolic and urinary disorder.
- To explore the primary management strategies for *Madhumeha*, including the use of *Ayurvedic* herbs.
- To evaluate the significance of lifestyle modifications in managing *Madhumeha*.

Material and Method

Various *Ayurvedic* texts, journals, research papers, articles, and credible websites were reviewed to study the *Ayurvedic* approach to *Prameha* and its efficacy in the manifestation and management of *Prameha* concerning Diabetes Mellitus.

***Nidana* (Etiology) of *Prameha* -[ivv]**

1. *Prameha* manifests due to two primary etiological factors. The first is *Sahaja* (hereditary or congenital), which is related to the morbidity of *shukra* (semen) and *shonita* (blood). The second is *Apathyanimittaja*, caused by improper diet and lifestyle habits.
2. Contributing factors include a sedentary lifestyle, excessive daytime sleeping, consumption of meat soup from domestic or aquatic animals, dairy products, jaggery, and similar items.
3. Consumption of *Kapha*-promoting substances, laziness, and intake of cold, unctuous, fatty, and sweet foods also contribute to the development of *Prameha.*
4. Foods, drinks, and activities that aggravate *meda* (fat tissue*), mutra* (urine), and *Kapha* are significant etiological factors for *Prameha.*
5. All factors associated with *santarpanottha vikara* (diseases caused by over-nutrition) are responsible for the genesis of *Prameha.*

According to Acharya Charak

आस्यासुखं स्वप्नसुखं दधीनि ग्राम्यौदकानूपरसाः पयांसि|

नवान्नपानं गुडवैकृतं च प्रमेहहेतुः कफकृच्च सर्वम्|| (च.चि.6/4)

Prolonged sitting on soft cushions, lack of physical activity, excessive sleeping, and the consumption of curds, meat from domestic, aquatic, or marshy animals, milk and its derivatives, fresh grains, fresh water, and sugary puddings made with jaggery, among other similar factors, contribute to the increase of *Kapha* in

the body. These lifestyle and dietary habits are identified as causes for the development of *Prameha* (diabetes) in *Ayurveda.*[vi]

Samprapti (Pathogenesis) of *Prameha* (diabetes)

According to *Acharya charka*

मेदश्च मांसं च शरीरजं च क्लेदं कफो बस्तिगतं प्रदूष्य|

करोति मेहान् समुदीर्णमुष्णैस्तानेव पित्तं परिदूष्य चापि||५||

क्षीणेषु दोषेष्ववकृष्य बस्तौ धातून् प्रमेहाननिलः करोति|

दोषो हि बस्तिं समुपेत्य मूत्रं सन्दूष्य मेहाञ्जनयेद्यथास्वम्||६||(च.चि.6/5,6)

Nidana Sevana (Consumption of Etiologiacal factors)

↓

Aggravation of *doshas*

↓

Vitiate *Dushya* i.e *Medas,Rakta,Shukra,Ambu,Vasa,Lasika,Majja,Rasa,Ojasa* and *Mumsa*

↓

Get Localizedin the *Mutravaha Strotasa*

↓

Prameha

↓

Nigligence to *Prameha* leads to *Madhumeha*

Fig. no.1: General *samprapti chakra of Prameha* (diabetes)

Acharya Vagbhatta provides a detailed explanation of the pathogenesis *(Samprapti*) of *Madhumeha*, stating that it can develop in two primary ways: firstly, through the aggravation of *Vata* caused by *Dhatukshya* (tissue depletion), and secondly, by the obstruction of *Vata* due to the covering by other *doshas. Madhumeha* caused by *Dhatukshya* typically presents in individuals who are thin and asthenic due to the loss of *Ojas* (vital essence), a condition referred to as *Ojakshaya* (imbalance in *Ojas).* In cases of *Margavaranjanya Madhumeha*, the vitiated *Kapha* and *Meda* obstruct the passage of *Vata*. The obstructed *Vata* becomes further vitiated and carries *Ojas* to the *Basti* (urinary bladder), leading to the manifestation of *Madhumeha.*

According to *Ayurveda,* the manifestation and severity of disorders are influenced by the potency of etiological factors, *doshas*, and *dushyas* (bodily tissues). When these three factors do not combine or do so after a prolonged period or in a weakened state, the disorder may not manifest, or it may appear later, in a milder form, or without all typical symptoms. Conversely, a robust combination of these factors results in the full manifestation of the disorder. This concept explains the variability in the presentation and progression of diseases, including *Madhumeha.*

Specific Pathogenesis[vii]

- *Kaphaja Prameha*:The vitiated *Kapha* contaminates the fat, flesh, and body fluids accumulated in the urinary bladder, causing 10 types of *Prameha.*
- *Pittaja Prameha*:Similarly, *Pitta*, aggravated by the consumption of hot foods and other etiological factors, contaminates the fat, flesh, and body fluids, leading to 6 types of *Pittaja Prameha*.
- *Vataja Prameha*:When Pitta and *Kapha* decrease in quality and quantity compared to *Vata*, the *Vata dosha* becomes aggravated and pulls the tissues, such as fat (*Vasa*), marrow (*Majja*), vital essence (*Ojas)*, and lymph *(Lasika),* into the urinary bladder, resulting in 4 types of *Vataja Prameha.*

Poorvarupa of *prameha*[viii]

During the premonitory stage of *Prameha*, the aggravation of all three *doshas* leads to a range of characteristic symptoms. These include matting of hair and a sweet taste in the oral cavity. Patients may experience numbness and burning sensations in the hands and feet, as well as dryness in the mouth, palate, and throat, accompanied by increased thirst and a general sense of lassitude. There is also excessive accumulation of waste products on the body, particularly in the palate, throat, tongue, and teeth, along with adherence of excreta in body orifices. A general burning sensation and numbness throughout the body are common, as is the unusual accumulation of bees and ants around the body and urine. Abnormalities in urine, a fleshy odor emanating from the body, and excessive sleep and drowsiness are also observed. These symptoms signal the onset of *Prameha* and highlight the need for early intervention and management to prevent further progression of the disease.

Clinical Features (Roopa)[ix]

- Passage of profuse and/or turbid urine.
- Urine becomes sweet like honey.
- The entire body exhibits a sweet characteristic.

According to *Sushrut acharya*

- Individuals with *Sahaja Meha* (congenital diabetes) are usually *Krisha* (thin built).
- Individuals with *Apathyanimittaja Meha* (diabetes due to improper diet and lifestyle) are usually *Sthula* (obese).

Classification of *Prameha*:

- *Kaphaj Prameha*: 10
- *Pittaj Prameha*: 6
- *Vataj Prameha*: 4

Classification of Diabetes Mellitus[x]

1) Type 1 Diabetes Mellitus (IDDM): Previously known as juvenile-onset diabetes, Type 1 diabetes is typically diagnosed in children, teenagers, and young adults. It can also develop in adults. This autoimmune disease results in the destruction of the pancreas's beta cells, leading to absolute insulin deficiency.
2) Type 2 Diabetes Mellitus (NIDDM): Formerly referred to as adult-onset diabetes, Type 2 diabetes is the most common form and often has a gradual onset. It is frequently seen in adults but can occur in children as well. Significant weight loss is rare unless hyperglycemia is severe, and ketosis is uncommon. Familial inheritance is very common in Type 2 diabetes. The disease usually starts with insulin resistance, accompanied by compensatory hyperinsulinemia. Over time, the pancreas loses its ability to produce sufficient insulin in response to meals, resulting in clinical diabetes.

Differential Diagnosis

If the urine is yellow in color or if blood is present in the urine without the prior appearance of premonitory signs and symptoms of *Prameha*, the condition should instead be diagnosed as *Rakta-Pitta*. This differential diagnosis helps distinguish between *Prameha* and other urinary disorders based on the presence of blood or specific urine color changes without early warning signs.

Prognosis (*Sadhya-Asadhyata*) and Incurability[xi]

- *Kaphaja Prameha:* Considered curable *(Sadhya*) due to its treatable nature.
- *Pittaja Prameha*: Manageable (*Yaapy*a) but not completely curable, as it tends to fluctuate.
- *Vataja Prameha*: Incurable (*Aasadhya)* due to its severe and complex nature.

Diabetes syndrome that is present from birth due to genetic defects is considered incurable. All stages of diabetes syndrome, if not properly treated, can lead to severe complications such as chronic renal failure (CRF), retinopathy, and multiple organ failure, which are also deemed incurable. These conditions underscore the importance of early and effective management of diabetes to prevent severe complications.

Treatment

- For *Krisha Pramehi* (Type 1 Diabetes Mellitus patients):
  - Advised to have *Bringhan* medication (Anabolic) that promotes the increase of *Dhatus* (tissues) in the body.
  - Diet should support the nourishment and growth of bodily tissues.
- For *Apathyanimittaja Rogi* (Type 2 Diabetes Mellitus patients):

Obese diabetic patients with optimal body strength and a significant increase in *Doshas* should undergo *Samshodhan* (purification) of the body. This includes:

- *Snehana* (Oleation)
- *Shodhana* (Detoxification)
- *Virechana* (Purgation)
- *Vasti (*Therapeutic enema, both Asthapana and Niruha types)
- *Shamana* (Pacification)

Additionally, incorporating exercise and lifestyle modifications is crucial:

- Regular physical activity and exercise.
- Practicing *Yogasana* (yoga postures) and *Pranayama* (breathing exercises).
- Maintaining a regular routine for food and sleep.
- Following *Ritucharya* (seasonal regimen) and *Dincharya* (daily regimen).

***Ayurvedic* Herbs in the Management of *Prameha* (Diabetes Mellitus)-**

Since *Kapha dosha* predominates in *Prameha*, and the affected tissue (*Dusya*) *Meda* (fat) shares a similar nature, *Ayurveda* recommends using drugs with *Tikta* (bitter), *Katu* (pungent), and *Kasaya* (astringent) Rasa for treatment. *Acharya Susruta* specifically highlights the efficacy of a decoction made from *Salasaradi Gana* herbs combined with *Shilajatu (Shilajit*) for treating "*Prameha/Madhumeha*".

Drugs-[xii]

- *Haridra*(Curcuma longa)
- *Nimba*(Azadirachta indica)
- *Karela*(Momordica charantia)
- *Bela*(Aegle marmelos)
- *Haritak*(Terminalia chebula)
- *Patola*(Trichosanthes dioica.)
- *Guggulu*(Commiphora wightii)
- *Amalaki*(Phyllanthus emblica)
- *Musta*(Cyperus rotundus)
- *Daruharidra* (Berberis aristata)
- *Arjuna* (Terminalia arjuna)
- *Khadir* (Acacia catechu)
- *Lodhra* (Symplocos racemosa)
- *Guduchi* (Tinospora cordifolia)
- *Patol* (Trichosanthe dioica)
- *Vata* (Ficus bengalensis)
- *Udumbar* (Ficus glomerata)
- *Gudmar* (Gymnema sylvestre)
- *Shilajit* (Purified Bitumen)-(most effec tive)
- *Agnimantha*(Clerodendrum phlomidis)
- *Shigru*(Moringa oleifera)
- *Usir*(Vetiveria zizanioides)
- *Jambu*(Syzygium cumini)

Formulations use in*Prameha* (Diabetes Mellitus)-[xiiixiv]

- *Guduchi swarasa* (Tinospora cardifolia) – with honey (A.H.Ci 12/6)
- *Amalaki Curna* (Phyllanthus emblica) – with honey (A.H.Ut. 40/48)

Avaleha:

- Saraleha*: (Bhavaprakash*)
- *Gokshuradyavaleha (Bhavaprakash*)

Kwatha:

- *Darvi, Surahwa, Triphala, Musta*
- *Triphala, Darvi, Vishala, Musta* [14,15]

Other formulations: [xvxvi]

- *Nyagrodhadi churna* – with honey
- *Eladi churna* – with tandulodaka
- *Mustadi kwatha* – with water
- *Vidangadi kwath* – with honey
- *Chandrakala gutika* – with water
- *Chandraprabha vati* – with water
- *Shalmali grhuta* – with lukewarm water
- *Dadimadi ghruta* – with lukewarm water
- *Vaidangadi lauha* – with lukewarm water
- *Devtarvyarishta* – with equal water

Discussion

Diabetes Mellitus (*Madhumeha*) in *Ayurveda* provides acomprehensive approach to understanding, managing, and treating this chronic condition. The discussion focuses on integrating traditional *Ayurvedic* principles with modern medical insights.*Ayurveda* emphasizes the balance of *doshas (Vata, Pitta, Kapha*) and the importance of lifestyle and dietary habits. *Madhumeha* is seen not just as high blood sugar but a systemic disorder affecting various bodily functions.The two primary factors are *Sahaja* (hereditary) and *Apathyanimittaja* (lifestyle-induced). This aligns with modern views on diabetes, acknowledging the roles of genetics and lifestyle.

Dosha imbalances, especially in *Vata* and *Kapha*, play a crucial role in the pathogenesis of *Prameha* and *Madhumeha*. This involves systemic issues affecting bodily tissues and urinary channels.*Ayurveda* focuses on body rejuvenation to control blood sugar levels and enhance overall vitality, preventing complications through dietary regulations, herbal medications, and lifestyle modifications.The pandemic has highlighted the need for stress management and mental health care. *Ayurveda's* lifestyle approach offers methods to manage stress and enhance immunity.

Conclusion

Ayurvedic management of Diabetes Mellitus (*Madhumeha*) presents a nuanced and holistic approach, integrating dietary guidelines, lifestyle modifications, and medicinal herbs to complement conventional diabetes treatment. *Ayurveda* identifies *Madhumeha* as both a metabolic and urinary disorder, emphasizing the importance of *dosha* balance and tissue health. The use of herbs like *Shilajit*, *Khadir*, *Lodhra*, *Guduchi*, and *Jambu*, along with lifestyle changes, forms the core of its therapeutic strategies. Early detection through recognition of premonitory symptoms (*Poorvarupa*) and clinical features *(Roopa*) is crucial for intervention. *Ayurvedic* treatment incorporates *dosha*-specific therapies, combining herbal medications, diet, and lifestyle adjustments to manage diabetes effectively. Additionally, the approach highlights the need for stress management and mental well-being, especially in light of modern challenges such as the COVID-19 pandemic. Integrating *Ayurveda* into diabetes care promotes long-term health and wellness by achieving balance in bodily functions and preventing complications, making it a valuable complement to modern medicine. Further research and clinical trials are essential to validate these ancient practices and ensure a holistic approach to diabetes care globally.

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