



## ETIOPATHOGENESIS AND MANAGEMENT OF MADHUMEHA (Type-2 DIABETES MELLITUS)

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## ABSTRACT

*Ayurveda* is an ancient Indian health-care system that has been practiced since the beginning of civilization. *Ayurveda* gives special importance to preventive and protective aspects of health. The principles of *Dinacharya*, *Ritucharya*, *Sadvritta*, and *Achara Rasayana*. As well as suggestions for a balanced diet and lifestyle, are well known in *Ayurveda*, but few individuals are able to follow them well in the contemporary situation. Diabetes mellitus is the leading cause of morbidity and mortality the world over. It is estimated that approximately 1% of the population suffers from DM. The incidence is rising in developed countries of the world at the rate of about 10% per year, especially of type-2 DM, due to rising incidents of obesity and reduced activity levels. Type 2 diabetes mellitus is responsible for about 80% of cases. *Madhumeha* is one of the types of *vataja Prameha* in *Ayurveda*, its etiopathogenesis, clinical symptoms, and prognosis are similar to Diabetes mellitus. *Madhumeha* is caused by lack of exercise, excessive consumption of food containing *Snigdha*, and *Guru Guna*, bad dietary habits, and food that induces *Kapha Dosha* vitiation. *Ayurvedic* management principles can help patients regulate their blood glucose levels and change their habits.

**Keywords:** *Madhumeha*, *vataja Prameha*, *Ayurveda*, Diabetes mellitus

## INTRODUCTION

Diabetes mellitus is a group of metabolic diseases in which there are high blood sugar levels over a prolonged period, and it is the world's deadliest silent killer. According to the World health organisation, India has the fastest-growing number of Diabetes Patients. With the growth of population, ageing, urbanization, and increase in absence of physical activity the number of people with Diabetes is increasing, which has a huge impact on social health and economic outcomes,<sup>1</sup> Acharya has mentioned *Nidana* that which directs or guides the course of the disease, Various *Nidana* has been explained for the manifestation of various diseases under the category of *Aharaja*, *Viharaja* and *Manasika Nidana*. Acharya Charaka narrated specific *Nidana* for *Madhumeha*, Progression of this disease may affect all the 10 *Dushyas* and lead to *Upadrava* and many features correlate with the disease Type 2 Diabetes mellitus. *Madhumeha* is one of the *Ashta Mahagada*. *Madhumeha* is a variety of *Vataja Prameha*, which is referred to as a sequel of all varieties of *Prameha*, the etiological factors end up in the vitiation of *Vata kapha Pradhana Tridoshas* getting associated with *Medas*, *Ojas*, etc *Dhatu*s, reaching the *Mootravaha Srotas* resulting in illness, the *Nidana* of *Madhumeha* are mentioned as *samanya* and *Vishesh Aharaja* and *Viharaja Bhava Janya Nidana*. The *Samanaya Aharaja* includes *Sheeta*, *Snigdha*, *Madhura*, *Madhya* and *Drava Anupana* and *Vihara* includes *Divaswapna*. *Avyayama* and *Alasya*, is a risk factor of *Madhumeha*. In the context of treatment choices, the prime importance is given to the *Nidana Parivarjana* i.e., avoidance of the etiological factors.

**AIMS AND OBJECTIVE:** To Study Details Etiopathogenesis and Management of *Madhumeha*

**METHODOLOGY:** Materials pertaining to *Madhumeha* were provided by various newspapers, contemporary Ayurvedic Literature, Research articles, Journals, modern books, Sanskrit Shabdakosha, and internet sources to collect sufficient for study.

**MADHUMEHA  
ETYMOLOGY.**

The word *Madhumeha* consists of two-word *Madhu* + *Meha* the word *Madhu* is derived from the root 'Man-yante Visheshena Janati Jana Yasmin'. In Sanskrit literature, the *Madhu* word is used in various contents like *Puahapara Makaranadah*, *Makshikam*, *Makshikam*, *Madhyam*, *Kshiram*, *Jalam*, *Madhura*, *Kshiram*, *Jalam*, *Madhurarasa*, etc. So, the concise and specific etymology is that the disease in which the excretion is has quality concordant with *Madhu* in its colour, taste, and smell. And consistency called *Madhumeha*.

**NIRUKTI.**

The word is mainly related to excretion through urine. so the definition is the clinical entity in which the patient passes urine similar to *Madhu* i.e of *Kashaya* and *Madhura* taste. *Ruksha* texture and honey-like colour. Body-acquired sweetness called *Madhumeha*.

Acharya Sushruta narrated the term *Kshaudrameha* in place of *Madhumeha*. *Kshaudra* is a subtype and synonym of *Madhu* (honey), so it undoubtedly resembles *Madhumeha*, further he asserted that when all the *Prameha* ill-treated or neglected get converted into *Madhumeha*.

**NIDANA:**

**Aharaja** -- Excessive intake of *Guru*, *Snigdha* .*Amla*. *Lavana*, *Navanna pāna*, *dadhi*, *guda vikrita*, *Shleshma janya ahara*, and *gramya*, *anupa audaka Mamsa*. *Mutra Janak dravya*, *tikta*, *katu*, *kashaya rasa*.<sup>2</sup>

**Viharaja** – *Nidra*, *Asayasukha*, *Divaswapna*. *Swapna sukham*, *Avyayama*.

**Manasa** - *Vishada*, *Chinta*

**Anya Nidana**; *Beeja dosha*<sup>3</sup>

In modern science, also the above factors are mentioned and genetic predisposition of the disease, auto immunity, and psychosomatic effect of the disease is established.

**BHEDA:**

1. *Prameha* is classified as *sahaja* (hereditary) or *Ap- atya Nimittaja*
2. Based on physical appearance classified into *Apa- tarpana janya Prameha* (lean diabetic) and *Santar- pana janya* (obese diabetic)<sup>4</sup>

3. Based on *Doshic* involvement, these *Prameha* are classified into twenty categories<sup>5</sup>

a) *Vataja Prameha*, there are four types

1. *Vasameha*
2. *Majjameha*
3. *Hastimeha*
4. *Madhumeha*

b) *Pittaja Prameha*; there are six types.

1. *Ksharameha*
2. *Kalameha*
3. *Nilameha*
4. *Lohitmeha*
5. *Manjishtameha*
6. *Haridrumeha*

c) *Kaphaja Prameha*- there are ten types.

1. *Udakameha*
2. *Ikshuvalikameha*
3. *Sandrumeha*
4. *Sandrprasadmeha*
5. *Shuklameha*
6. *Sitameha*
7. *Siktameha*
8. *Sanairmeha*
9. *Alalmeha*

### PRVA RUPA <sup>7</sup>

<i>Purvarupa</i>	Ch.	Su.	A.H	Ma.
<i>Keseshu jatileeabhava</i>	+	+	-	-
<i>Asya madhurya</i>	+	-	+	+
<i>Karapada daha</i>	+	+	+	+
<i>Karapada suptata</i>	+	-	-	-
<i>Muka thalu kanta shosha</i>	+	-	+	-
<i>Pipasa</i>	+	+	-	+
<i>Alasya</i>	+	-	-	-
<i>Sweda</i>	+	-	+	-
<i>Madhura Mutrata</i>	-	+	+	-
<i>Kesha naka ativriddhi</i>	+	+	+	-

### RUPA

- A) *Prabhuta Mutrata*
- B) *Avila Mutrata*
- C) *Picchila Mutrata*
- C) *Atisweda*

### 10. Shukrameha

#### SAMPRAPTI GHATAKAS<sup>6</sup>

- *Dosha - vata, pitta, kapha*
- *Dushya - Meda. Kleda, Rakta, Vasa, Majja, Lasika, rasa, and Ojas (chi.ni4/4) and sweda (A.H Ni.10/4)*
- *Srotas - Mootravaha Srotas, Medovaha Srotas*
- *Srotodusti- Atipravrutti*
- *Agni - Vaishamya of all Agni, or Dhatavagni*
- *Ama - Jatharagnimandya*
- *Udbhavasthana – kostha*
- *Adishtana – Basti*
- *Vyaktasthana – Mootravaha Srotas*
- *Roga marga - Madyama*
- *Swabhava - Chirakari ( Cha.ni 4/3)*

#### SAMPRAPTI

Due to causative factors, *Dosha* gets imbalanced specifically *kledaka kapha, pachaka pitta, samana vayu,* and *apana vayu,* that causes *agnimandya* i.e., *Dhatavagni mandya* causes vitiation of all the *dushyas* mainly *Meda dhatu,* it causes unnecessary excessive body fluid oozed out from all *dhatu* so the body tries to excrete in the form of urine.<sup>6</sup>

- D) *Dourbalya*
- E) *Pipasa*
- F) *Karapada daha*
- G) *Khsudha adikya*

## MAIN SYMPTOMS <sup>8</sup>

1. Body ache
2. Polydipsia,
3. Polyuria
4. Polyphagia,
5. Recurrent infections
6. Unexplained weight loss
7. Delayed healing of the wound and in severe cases drowsiness and coma.

## SADHYASADHYATA (PROGNOSIS) <sup>9</sup>

<i>Sadhya</i>	<i>Yapya</i>	<i>Asadhya</i>
<i>Kaphaja</i>	<i>Pittaja</i>	<i>Vataja</i>
Obese	Usually not much obese	<i>Asthene (KRUSHA)</i>
Acquired	Acquired	Hereditary
<i>Sadhya</i>	<i>Yapya</i>	<i>Asadhya</i>
Early stage	Acute stage	Advance stage
without complication	with complications	with complication

## CHIKISTA <sup>9</sup>

Madhumeha is experienced differently based on a person's *prakruti*, According to *Ayurveda*. Asiad from medications and diets, the patient was encouraged to live a lifestyle and lead an independent life based on a complete lifestyle change.

- 1) *Stholya*
- 2) *Krusha*

### 1. In *Stholya*

- *Patya* and *Apatya*
- *Panchakarma* treatments like – *vamana*, *Virechana*, *Basti*
- *Shodana*
- *Apatarpana*
- *Langhana*
- *Vyayama*

### 2. In *Krusha*

The patients should not expose to excessive *Langhana* or *Apatarpana* i.e., should not be starved, and focus on treatment should give strengthening resistance and stamina through tonics, diet, medicine, and other measures. Diabetes and obese patients have excessive hunger and thirst, they should be fed a diet on a regular basis.

## Drugs <sup>10</sup>

1. *Haritaki*

2. *Amalaki*
3. *Shilajatu*
4. *Guggulu*

## Single formulations <sup>11</sup>

1. *Guduchi swarasa* ( *Tinospora cardifolia* ) – 10-15ml twice a day with honey
2. *Amalaki churna* ( *Emblca officinalis* ) – 5 gm twice a day with honey

## Kwatha

1. *Nisha*, *Amalaki*<sup>12</sup>
2. *Haridra*, *Kataka*, *Paaranti mula*, *Lodhra*, *Amalaki*, *Bhadarika*, *Meharimula*, *Usira*<sup>13</sup>

## Avaleha

1. *Gokshuradyavaleha* ( *Bhavaprakasha* )
2. *Saraleha*

## DIET

The following diet can be given to the with Diabetes  
**Cereals:** *Yava* can be given diverse meals, such as barley, mantha, odana, and other similar products can be found. Roti is a bread variety. Wheat may also be provided. *Purana shali* is a good choice.

**Pulses:** *Mudga*, *Chanaka*, and *Kulatta* are some of the pulses that may be consumed.

**Vegetables:** Bitter vegetables (*Tikta rasa*), such as karela (*momordica charantia*, in Kannada hagalkayi)

Methi (*Trigonella foenum-graecum*), *Patola* (Vietnamese luffa,) *Rasona* (*Allium sativum* linn).

**Phalas:** *Jambu* (*Syzygium cuini* – black berry), *Kapitta* (*Phyllanthus emblica*), *Dhatri* (*Amla*) (*Embllica officinales*), etc.

### Vyayama

1. Gomukhasana
2. Salabhasana
3. Surya Namaskara
4. Pranayama
5. Chankraman

## DISCUSSION

There are lot many formulations prescribed by Ayurveda Acharyas for the management of *Madhumeha*. *Madhumeha* is included under *Mootravaha* *srootovikara* because they manifest in *Mootravaha* *Srotas*. *Madhumeha* is a subtype of *vataja Prameha*. Diabetes Mellitus can very well take care of by ayurvedic drugs without any hazardous side effects, In the management of *Madhumeha* such drugs are to be selected which are against *Meda* and *Kleda* as well as have the *Rasayana* effect. Diet is the most important factor in healthy body growth and development, and a poor diet leads to diseases, according to *Acharya Charaka*, a healthy diet rebuilds broken structures, nourishes the *Dhatu*s, and keeps the body's components in balance.

## CONCLUSION

The management of *Madhumeha* is described in classical texts according to the Peculiarities of *Dosha* and *Dushya* etc. Currently, a number of anti-diabetic agents are available to control hyperglycaemia but due to long-term or lifelong applications, their use is restricted because of the risk profile. Therefore, there is a need for satisfactory therapeutic modalities free from side effects. In Ayurveda, several plant-based drugs have been advocated to manage hyperglycemia. The

are many plants showing potential anti-diabetic properties. *Madhumeha* can be avoided if the change is a lifestyle and also to adopt the *Patya ahara Vihara*.

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