Diabetes Mellitus: An Ayurvedic View

Sipika Swati, Prateek Agarwal*

Abstract

Diabetes Mellitus refers to a group of common metabolic disorders that share the phenotype of hyperglycemia. Several distinct types of DM are caused by a complex interaction of genetics and environmental factors. Depending on the aetiology of the DM factors contributing to hyperglycemia include reduced insulin secretion, decreased glucose utilization, and increased glucose production. Diabetes is known as Prameha, which has been discussed in Ayurveda since antiquity. Caraka has given exhaustive description of the disease Prameha which ultimately progresses towards Madhumeha or the sweetness of urine in addition to Polyurea.

Keywords: Diabetes Mellitus, Hyperglycemia, Prameha.

INTRODUCTION

As of 2014, an estimated 387 million people have diabetes worldwide, with type-2 diabetes making up about 90% of the cases. This is equal to 8.3% of the adult population, with equal rates in both women and men. In the years 2012 to 2014, diabetes is estimated to have resulted in 1.5 to 4.9 million deaths per year. The causes of DM-2 are comparable to the disease entity Prameha/Madhumeha in Ayurveda. The Ayurvedic texts reflect two major categories of Prameha 1. Sahaja Prameha 2. Apathyanimittaja Prameha, out of these two, Apahtyanimittaja Prameha is closely resemblance with the contemporary concepts of Type-2 Diabetes mellitus. On this basis, Ayurveda has described Sthula Pramehi, which clearly corresponds to the current concepts of obese and its role in the genesis of type-2 Diabetes mellitus.

MATERIALS

All the description related to Prameha available in Caraka Samhita and Sushruta samhita is collected and reviewed. Prameha has been described eloquently and elaborately in Caraka Samhita (C.S.Ci.6). In Sushruta Samhita it is found in Nidana Sthana sixth chapter and in Cikitsa Sthana’s 11th, 12th and 13th chapter. While Madhavakara describes it in its 33rd chapter, which is Prameha Nidana.

Etymology of Prameha

The word Prameha consists of two words i.e. Pra (upsarga-prefix) and ‘Meha’. Meha is derived from the root ‘Mih Secane’ meaning watering with reference to disease of human body. Excessive quantity and frequency is indicated by the prefix Pra. Therefore the world Prameha means passing of urine profusely both in quantity and frequency.

Definition of Prameha

Acarya Vagbhata descríbes Prameha as frequent and copious urine with turbidity i.e. PrabhatAvila Mutrata.

Classification of Prameha

Twenty types of Prameha have been described in Ayurveda:

i. Kaphaja Prameha - 10
ii. Pittaja Prameha - 06
iii. VÁtaja Prameha - 04
Types of Prameha according to different texts

<table>
<thead>
<tr>
<th>Types</th>
<th>Caraka</th>
<th>Sushruta</th>
<th>Vagbhata</th>
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<tbody>
<tr>
<td>a. Kaphaja</td>
<td>1. Udakameha</td>
<td>Udakameha</td>
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<td>2. Iksvakkarasameha</td>
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<td>3. Sandrameha</td>
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<td>4. Sandra</td>
<td>Prasadameha</td>
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<td>5. Sakta meha</td>
<td>Pitameha</td>
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<td>6. Sukra meha</td>
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<td>7. Stameha</td>
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<td>8. Sikataameha</td>
<td>Sikataameha</td>
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<td>9. Sanairmeha</td>
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<td>10. Alalameha</td>
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<td>b. Pittaja</td>
<td>1. Ksandrameha</td>
<td>Ksandrameha</td>
<td>Ksandrameha</td>
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<td>2. Khalameha</td>
<td>Khalameha</td>
<td>Khalameha</td>
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<td></td>
<td>3. Nilameha</td>
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<td>4. Lehitameha</td>
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<td>5. Manjisthameha</td>
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<td>6. Haridrameha</td>
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<tr>
<td>c. Vanaja</td>
<td>1. Vasaumeha</td>
<td>Vasaumeha</td>
<td>Vasaumeha</td>
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<td>2. Majameha</td>
<td>Majameha</td>
<td>Majameha</td>
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<td>3. Hastimeha</td>
<td>Hastimeha</td>
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<td></td>
<td>4. Madhumameha or Ojyameha</td>
<td>Madhumameha</td>
<td>Madhumameha</td>
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Aetiological classification

On the basis of aetiology, Sushruta has mentioned clearly two types of Prameha. One is Sahaja (hereditary) another is Apathyanimitattaja (Acquired). Acarya Bhela has named them as – Prakëtaja and Svakëtaja Prameha.

a. Sahaja : Sahaja Prameha occurs as a result of Bija dosa i.e. genetic origin. While describing prognosis, Acarya Caraka has narrated that Jatapramehi is incurable.

b. Apathyanimitattaja : It occurs due to unwholesome Āhara & Vihara. (Faulty diet & life style errors)

Prognostic classification

Sadhya : Kaphaja, Shhula, Apathyanimitattaja. New case without complications, Pittaja in which Medodihatu not highly vitiated.

Yaya : Pittaja Prameha

Asadhya : Vatata, Jatapramehi

ETIOLOGY

The general etiological factors of Prameha are elaborately mentioned in Ayurvedic classics. For convenience, aetiological factors can be broadly classified into Sahaja and Apathyanimittaja.

Sahaja Nidana

In addition to other factors, the classics have also accepted the concept of hereditary factor as a cause of Prameha. Caraka has mentioned that overindulgence of Madhura rasa by mother during pregnancy is likely to induce Prameha.

Apathyanimittaja

Hayanaka, Yavaka, Cinaka, Uddalaka etc. in newly cultivated form. Consumption of new pulses like Harenu and Masu with Ghrita,Guda and Iksu vaikrita preparation, milk, fresh milk, Mandaka dadhi and all other materials which increase Kapha. Lack of exercise, Laziness, Excessive sleep during day, alcohol consumption etc.

Clinical features of Prameha

The Rupa described in Ayurveda includes both signs and symptoms. These can be categorized under following head:

1. General features of Prameha.
2. Premontory features of Prameha.
3. Specific symptomatology of Prameha

1. General features of Prameha

a. Urine Characteristics:

Prabhutamutrata : This cardinal feature described by all Àcharyas. Vagbhata mentioned Prameha as the disease of Mutratipravrtija (A.H.Ni 9/40) i.e. patient voids more urine both in quantity and frequency. Gayadasa on (Su. Ni. 6/6) opines that this excess urine quantity is because of liquidification of the Dusyas and their amalgamation.

Àvilamutrata : Patient voids turbid urine. According to Gayadasa and Dalhana, this turbidity is due to the nexus between Mutra, Dusya and Dosa. (Su.Ni. 6/6)

Kasýapa mentioned following symptoms of Prameha to be observed in pediatric patients (Ka. Su. 25/22).

- Akasmata Mutramirgama: Child excretes urine suddenly with no intention.
- Maksika Akaranta: Nephritis.
- Maksika Akaranta: Nephritis.

b. Associated signs and symptoms

Before propounding the treatment of Prameha, Àcharya Sushruta in Chikitsa sthana asserted two type of Prameha as follows:

Sahaja Pramehi

- Krisha (Asthenic)
- Rauksha (Dry body)
- Alpashi (consumes less food)
- Bahu Pipasa (Voracious thirst)
- Parisaranasila (Restless always desires to wander)

Apathyanimitattaja

- Shhula (Obese)
- Bahuasi (Voracious eater)
- Snigdha (Uncutou body texture)
- Sayyasanavapnasila (Like to sit down & sleep always)

2. Premonitory features of Prameha

According to Sushruta the person should be diagnosed as Pramehi when complete or partial premonitory symptoms of Prameha accompanied by polyuria (Prrvittamutramayartham) get manifested (Su.Ni.6/22-23). In this context, Gayadasa opined that in this disease all prodromal symptoms get converted into Rupa due to specific nature of disease i.e. Vyadhi Prabhava.

3. Specific Symptomatology of Prameha
This includes the physio-chemical characteristics of urine of twenty types of Prameha, which is based on specific interactions of Dusya and Dosa. Further categorized into three major head of Vataja, Pittaja, and Kaphaja Prameha. The clinical features are summarized in a given table.

### Clinical features of Kaphaja Prameha

<table>
<thead>
<tr>
<th>Name</th>
<th>Characteristics</th>
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</thead>
<tbody>
<tr>
<td>Udakameha</td>
<td>Individual passes large quantity of water like urine, which is transparent, white, cold and without any smell.</td>
</tr>
<tr>
<td>Akshwasrikarasameha</td>
<td>Urine like sugarcane juice and extremely sweet, cold and slightly slimy and turbid.</td>
</tr>
<tr>
<td>Sandrameha</td>
<td>Precipitation in the urine, which is deposited in the pot when kept for sometime. Urine is turbid and thick.</td>
</tr>
<tr>
<td>Sandraprasadameha/Sarameha</td>
<td>Urine is partially viscous and partially clear when kept overnight. Sarameha means alcoholic smell in the urine.</td>
</tr>
<tr>
<td>Nakalameha/Pstameha</td>
<td>Urine seems to be mixed with some pate.</td>
</tr>
<tr>
<td>Nakalameha</td>
<td>Urine passed mixing along with semen.</td>
</tr>
<tr>
<td>Shameha</td>
<td>Cold, sweet and increased quantity of urine with increased frequency.</td>
</tr>
<tr>
<td>Nikameha</td>
<td>Urine passed with some particles.</td>
</tr>
<tr>
<td>Sanmrimeha</td>
<td>Quantity of urine is small and passed with difficulty and slowly.</td>
</tr>
<tr>
<td>Alalameha/Lahameha</td>
<td>Urine is slimy like Kapha and seems as if full of threads.</td>
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</tbody>
</table>

### Clinical features of Pittika Prameha

<table>
<thead>
<tr>
<th>Name</th>
<th>Characteristics</th>
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</thead>
<tbody>
<tr>
<td>Ksharameha</td>
<td>Smell, colour, taste and touch of the urine is as like alkali.</td>
</tr>
<tr>
<td>Kolameha</td>
<td>Blackish urination.</td>
</tr>
<tr>
<td>Nilameha</td>
<td>Bluish urination.</td>
</tr>
<tr>
<td>Lohitameha/Raktameha</td>
<td>Colour of urine is reddish, having smell of fresh blood and salty taste.</td>
</tr>
<tr>
<td>Matijsthumae</td>
<td>Colour of urine is like decoction of Matijstahuha and smell like of raw flesh and passes frequently.</td>
</tr>
<tr>
<td>Haridrameha</td>
<td>Colour of urine is like decoction of Haridra (yellow) and taste pungent accompanied with burning sensation.</td>
</tr>
</tbody>
</table>

### Clinical features of Vatika Prameha

<table>
<thead>
<tr>
<th>Name</th>
<th>Characteristics</th>
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</thead>
<tbody>
<tr>
<td>Vasameha</td>
<td>Patient frequently passes urine mixed with fat (vīsa)</td>
</tr>
<tr>
<td>Majja meha, Sarpimeha</td>
<td>Patient frequently passes urine mixed with bone marrow like substance.</td>
</tr>
<tr>
<td>Hastimeha</td>
<td>Large quantity of urine passes as like in elephant.</td>
</tr>
<tr>
<td>Madhumeha, Ksaudrameha</td>
<td>Urine passes sweet, astringent like honey.</td>
</tr>
</tbody>
</table>

### General pathogenesis of Prameha

General pathogenesis of Prameha is described elaborately by Caraka in Nidana sthana (Ca. Ni. 4/8). Although Prameha is a Tridosha disease but initially it starts with derangement of Kapha Dosa. Prolonged and excess use of Kapha Prakopaka Ahura-Vihara leads to vitiation of Kapha. The vitiated Kapha (Bahudrava Kapha) have basic similarity to characteristics of Meda, both interact each other and flows with loose Medas in the system. During the course, the vitiated Kapha further interact with Mansa and Kleda. The association with Mansa produces Prameha Pidika. The association with Kleda converts the Kleda in to Mutra and the vitiated Meda and Kleda obstruct the opening of Mutravaha Srotas. They stay remain for some time and this retention for considerable duration causes Kaphaja type of Prameha.

According to Caraka, Kaphaja and Paittika Prameha follow the same course except with only one difference that Pitta is predominant in place of Kapha.

### Prameha Upadrava (Complications)

1. **General Complications**

   - **Trisna, Atisara, Daha, Daurbalya, Arocaka, Avipaka, Putimaña pidaka, Alaji, Vidradhi etc. (Ca.Ni.4/48)**

2. **Specific Complications**

   a. **Kaphaja Prameha**

      Maksikopasarpanam, Alasya, Mamsopacaya, Pratixaya, Saithilya, Arocaka, Avipaka, Kapha praseka, Chardi, Nidra, Kasa and Svasa (Su.Ni.6/15).

   b. **Pittaja Prameha**


   c. **Vataja Prameha**

      Hridgraha, Lauyli, Anidra, Stambha, Kampa, Sula, Baddha Purisatva (Su.Ni.6/15).

### Prameha Pidaka

Ayurvedic texts have described Prameha pidaka as a major complication of Prameha, Prameha pidaka develops dependently in patients of Prameha and independently in the patients having primary features of medodusti. These Prameha pidaka require surgical intervention.

### Prognosis

1. The ten Kaphaja Prameha are curable because of the compatibility in the principles of treatment due to similar nature of Dosa and Dusya i.e. Samakriyatvat.

2. The Pittaja Prameha are palliable because of the incompatibilities in the line of treatment i.e. Visamakriyatvat.

3. The Vataja Prameha are incurable because of great severity of disease or involvement of Dosa and Dusyas (especially Ojas) contradictory treatment i.e. Mahatyaatvat.

### Management of Prameha

(A) Cikitsa sutra (Principles of treatment)

(B) Chikitsa (Management)

**Chikitsa sutra (Principles of treatment)**

In all types of Pramehas, Kapha gets vitiated, but in Madhumeha comparatively Vata is often aggravated as well. Therefore therapies will be directed at both Kapha and Vata simultaneously.

Caraka has said that the patients who are obese and strong body built, one should adopt Sansodhana treatment and who are asthenic body built and weak, one should undergo for Brithmana therapy.
According to Sushruta, krisa Pramehi should be treated with Sattarpana measures processed diet and drink, while obesity should be treated with Apatarpana measures (Vyayama and shodhana).

**Chikitsa (Management):**

It consists of triangular approach.

1. Ahara (Diet)
2. Vihara (Exercise & Yoga)
3. Aussadhi (Medicines)

**Aussadhi (Medicines)**

As it is evident that Kapha Dosa is predominant in Prameha and the Dusya Meda is of same nature. In Ayurveda for the treatment of Prameha, drugs having Tikta (bitter), Katu (pungent) and Kasaya (astringent) Rasa have been recommended. Susruta clearly indicated the decoction of Salasaradi Gana drugs with Shilajatu for the treatment of "Prameha/Madhumeha".

**Ahara Chikitsa (Diet Therapy)**

First of all "Nidana Parivarjana" is very firmly advocated in all classics for the management of disease. So, ahara which does not increase body weight and opposite to etiological factors of Prameha is advised to the patient. It is well known that diabetes is a disease of modified life style and faulty Agni, so more emphasis should be given on diet and bio-purificatory measures.

Caraka has recommended Yava etc. as a principle diet for Pramehi. In this concern he suggested that Yava first given to animals and then remaining parts collected from the dung of that animals to be consumed by Pramehi.

**Vihara (Exercise)**

As mentioned earlier, lack of exercise and excessive sleep during day and night time play an important role in etiology and pathogenesis of Prameha. Sushruta has described that in advance stage of Prameha, Pramehi should practice of regular physical exercise, wrestling, actual sports, riding on a horse, or an elephant, long walks, pedestrian journeys, practicing archery, casting of javelins etc.

**Conclusion**

Diabetes Mellitus or Prameha is disease of Mutravaha Srotasa having Kapha dominancy. Diabetes Mellitus is defined as the state of chronic hyperglycemia due to impairment of insulin secretion or its action. Diabetes mellitus (DM) comprises a group of common metabolic disorders that share the phenotype of hyperglycemia. Through triangular approach of diet, exercise and medicine it can be managed by Ayurveda.

**References**

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