

## A REVIEW ARTICLE ON DIABETES MELLITUS- AN AYURVEDIC APPROACH

Pratibha<sup>1</sup>, Ved Prakash<sup>2</sup>, Rishu Sharma<sup>3</sup>, Mahendra Singh<sup>4</sup>

<sup>1</sup>MD Scholar, PG Department of Rachna Sharir, <sup>2</sup>Assistant Professor, Department of Rog Nidan, <sup>3</sup>Assistant Professor, Department of Shalakyta Tantra, <sup>4</sup>Professor & HOD, PG Department of Rachna Sharir, SGCAS & Hospital, Tanta University, Shri Ganganagar, Rajasthan, India

Email: [pratibhaphogat@yahoo.in](mailto:pratibhaphogat@yahoo.in)

### ABSTRACT

Diabetes Mellitus is one of the most common non-communicable diseases. In India, it is emerged as a health problem. Diabetes Mellitus is a heterogeneous metabolic disorder characterized by common feature of chronic hyperglycemia with disturbance of carbohydrate, fat and protein metabolism. In *Ayurveda*, it can be explained as *Madhumeha*. It is one of the types of *Vataj Prameha* where the patient passes honey like sweet urine. The main causative factor is sedentary life-style, excessive intake of dairy product, sweet, non-vegetarian, jaggery and heavy excess meals. In *Ayurveda*, it can be managed conservatively with diet, exercise and medication. Drugs like *Shilajit*, *Khadir*, *Lodhra*, *Guduchi* and *Jambu* are effective in controlling *Madhumeha*.

**Keywords:** Diabetes Mellitus, *Madhumeha*, Hyperglycemia, Turbid urine

### INTRODUCTION

Diabetes Mellitus is defined as a heterogeneous metabolic disorder characterized by common feature of chronic hyperglycemia with disturbance of carbohydrate, fat and protein metabolism.<sup>1</sup> *Ayurvedic* remedies for *Madhumeha* (Diabetes mellitus) are the oldest among all the available therapies. *Prameha* are a list of urinary disorders, especially characterized by profuse urination with several abnormal qualities due to imbalance of *Doshas*. In

*Madhumeha* the urine becomes (sweet and smells) like honey. It is of two distinct types, one due to the aggravation of *Vata* on account of the *Dhatukshya* and the other due to *Kapha-Meda Avarana* (Blockage of channel) along with *Vata prakopa*. When there is condition of *Avarana* (blockage of the channels/ activity) there are the additional symptoms of the vitiation of the particular *Dosha* without any other apparent cause<sup>2</sup>. Sometimes the symptoms are

mild and suddenly they appear in severe form which is difficult to cure.

### Aims and Objective:-

- To access *Madhumeha* is a metabolic as well as urinary disorder.
- To access clinical presentation of *Madhumeha*.
- To access the principle management of *Madhumeha*.
- To access the importance of life-style modification in *Madhumeha*.

### Material and Method:-

- It is a review study article.
- In classical *Ayurvedic* literature, the *Madhumeha's* described form of etiology, causative factor, sign & symptom and treatment briefly in *Brihattraai* and *Bhava-prakash*.
- In this article review some *Ayurvedic* text, modern books, PUBMED and Research article.

### Nidana (Etiology)-

According to *Acharya charka*

आस्यासुखं स्वप्नसुखं दधीनि ग्राम्यौदकानूपरसाः पयांसि  
नवान्नपानं गुडवैकृतं च प्रमेहहेतुः कफकृच्च सर्वम् ४

Indulgence in sitting on soft cushions for long periods (thus avoiding physical activity), sleeping for long hours, use of curds, flesh of animals of domestic, aquatic or of marshy places, milk (and its preparations), fresh grains, fresh water, puddings made of jiggery/sugar (and its other products) and all other similar factors which bring about increase of *Kapha* in the body are the causes for *Prameha* (diabetes).<sup>3</sup>

### Samprapti (Pathogenesis) –

According to *Acharya charka*:

मेदश्च मांसं च शरीरजं च क्लेदं कफो बस्तिगतं प्रदूष्य  
करोति मेहान् समुदीरंमुष्णैस्तानेव पित्तं परिदूष्य चापि ५

जीरेषु दोषेष्वववृष्य वस्तौ धातून् प्रमेहानग्निलः करोति  
दोषो हि बस्तिं समुपेत्य मूत्रं संदूष्य मेहाञ्जनवेद्यथास्वम् ६

*Samprapti* of *Madhumeha* is best described by *Acharya Vagbhatta*. He said *Madhumeha* can originate in two ways<sup>4</sup> -

1. By the aggravation of *Vata* caused by *Dhatukshya*.
2. By the obstruction of *Vata* caused by *Doshas* covering it.

*Madhumeha* which is caused by *Dhatukshya* manifests as thin and asthenic individual due to loss of *Oja*. All this is *Ojakshaya* (imbalance in *Ojus*). In *Margavaranjanya Madhumeha* the vitiated *Kapha* and *Meda* obstruct the passage of *Vata*. The obstructed *Vata* is vitiated again and carries *Ojus* to *Basti* thus manifests *Madhumeha*.

As per *Ayurveda* according to the potency of particular feature of etiology, *Dosha* and *Dushyas*, response occurs in the form of non-manifestation or other-wise of the disorders. When these three factors do not combine together or if combined after a long time or in weakened state, disorder will not be there, or it will manifest lately, or in a mild form or without all the said symptoms. On the contrary, the result will be contrary. Thus is said the cause of response in the form of non-manifestation or otherwise of all disorders.<sup>5</sup>

### **Poorvaroopa (Premonitory Symptoms) –**

There premonitory symptom are- feeling of burning in the palms and soles, body (skin) becoming slimy, heaviness in body, urine is sweet, bad in smell and white in color, stupor, debility, profound thirst, dyspnea, more accumulation of dirt in the palate, throat, tongue and teeth, hairs of the head adhering to one another and more growth of the hairs and nails.<sup>6</sup>

**Roopa (Clinical Features) -** The general feature of the diabetes syndrome is-

- ✓ Passage of a profuse and/ or turbid urine,
- ✓ The urine becomes like honey
- ✓ The entire body becomes very sweet.<sup>7</sup>

*Sushrutacharya* also says that *Sahajameha Rogi* is usually *Krishna* (thin built) while *Apathanimittaja Rogi* is usually *Sthula* (Obese).<sup>8</sup>

### **Classification of Diabetes Mellitus<sup>9</sup>:-**

**Type- 1 Diabetes Mellitus (IDDM) -** Type 1 diabetes, formerly called juvenile-onset diabetes, is usually diagnosed in children, teenagers and young adults. Type 1 diabetes may develop in adults. This is an autoimmune disease causing destruction of Beta-cells of pancreas which results in an absolute insulinopenia.

**Type- 2 Diabetes Mellitus (NIDDM) -** Type 2 diabetes, formerly called adult onset diabetes, is the most common form and has an insidious onset. It is commonly seen in adults, but can occur even in childhood. Weight loss is uncommon unless hyperglycemia is severe while ketosis is rare. Familial inheritance is very common. This form of diabetes usually begins with insulin resistance and initially

there is a counter regulatory hyperinsulinaemia. With time, the pancreas loses its ability to secrete enough insulin in response to meals and clinical diabetes develops.

### **Classification of Prameha:**

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

### **Other types of diabetes-**

A number of other types of diabetes exist which develop due to:

- Genetic defects of the beta-cell function
- Genetic defects in insulin action
- Disease of exocrine pancreas
- Endocrinopathies
- Infections
- Rare autoimmune disorders
- Genetic syndromes associated with diabetes

### **Criteria for the diagnosis of DM:-**

Fasting:-

- Normal- < 110 mg/dl
- Impaired fasting glucose- > 110 and < 126 mg/dl
- Diabetes mellitus- ≥ 126 mg/dl

2-hour post load -

- Normal- < 140 mg/dl
- Impaired glucose tolerance- > 140 and < 200 mg/dl
- Diabetes mellitus- ≥ 200 mg/dl with symptoms

### **Investigation:-**

- O.G.T.T. (Oral Glucose Tolerance Test)
- Lipid profile

- Liver Biochemistry
- Glycosylated Haemoglobin (GHb)
- Blood glucose-Random, Fasting, Post-prandial
- Urine tests-Urine testing for glucose is still widely used.
- Protein urea is a reflection of the development of renal complication.

### **Upadrava (Complications):-**

*Daha, trishna, hrichadaha* (Sour belching), *moorcha, anidra, kampa, Krisha* (emaciation), *swash* (increased breathing), too much elimination of urine (*prabhutmootrata*), improper digestion (*ajeerna*), *vamana*. Troubled by appearance of deep seated *Pidikas* (Eruption), Feeling of heaviness of the body (*Gaatragururta*).<sup>10</sup>

1. Metabolic complication- Keto-acidosis, Hyper-osmolar coma
2. Infective- Bacterial and fungal infections of the skin, mucosa, soft tissues, bone, urinary tract and lungs.
3. Late complication- Atherosclerosis- Coronary heart disease, cerebro-vascular disease and Peripheral vascular disease. Cataract, Diabetic ulcer (Diabetic foot), Nephropathy, Retinopathy, Dermopathy, Neuropathy- Polyneuropathy, autonomic neuropathy.
4. Complications of therapy- Hypoglycemia, Insulin resistance, Insulin allergy, Lipodystrophy, Lactic acidosis, Depression of bone marrow.
5. Maternal and fetal disorder in G.D.M.<sup>11</sup>

### **Prognosis (Sadhya-Asadhyata) Incurability:-**

- *Kaphaj Prameha: Sadhya (Samkriyatvaat)*
- *Pittaj Prameha: Yaapya (Vishamkriyatvaat)*
- *Vataj Prameha: Aasadhya (Mahatyatvaat)*

The diabetes syndrome since birth due to a genetic defect is said to be incurable. All stage of the diabetes syndrome, if not treated properly lead to severe complication like CRF (Nephropathy), Retinopathy and multiple organ failure are incurable.<sup>12</sup>

### **Treatment-**

In general, *Krishna Pramehi* which is co-related with Type 1 Diabetes mellitus patients are advised to have *Bringhan* medication (Anabolic) as well as a diet which increase *Dhatus* in the body.<sup>13</sup>

In *Apathyanimitaja Rogi* which is co-related with Type 2 Diabetes, Obese diabetic patients with optimal body strength having intense increase of *Doshas*, *Samshodhan* (purification) of the body advocated.

- *Snehana*
- *Shodhana*
- *Virechana*
- *Vasti (Asthapana/Niruha)*
- *Shamana*
- Exercise and life style modification & following regular regimen of exercise, *yoga-sana, pranayama* and regular food & sleep, following *Ritucharya & Dincharya*.

### **Herbal medications helpful in Madhumeha**<sup>14</sup>

- *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 effective)
- *Nimba (Azadirachta indica)*

**Preparations used in a patient of Madhumeha for effective management<sup>15</sup>-**

- (a) *Ghrita & Taila- Trikantakdya Sneha, Dhavantar Ghrita, Triphala Ghrita, Pramehamihir Taila.*
- (b) *Asava-Arista- Lodhra Asava or Madhva Asava, Datya Asava, Bhallataka Asava.*
- (c) *Leha (Paste) - Salsaradi leha, Kusha Avleha, Vanga Avleha.*
- (d) *Udaka- Sarodaka, Kushodaka, Madhukodaka, Sidhu, Madhvika.*
- (e) *Vati (Tablet)- Trikatukadya Modaka, Shiva Gutika, Shilajatvadi Vati, Chandra-prabha Vati, Indra Vati, Gokshuradi Vati, Aarogyavardhini Vati.*
- (f) *Churna (powders) - Nyagrodadi Churna, Eladi Churna, Karkatbijadi Churna, and Triphala Churna.*
- (g) *Rasa/ Bhasam- Vasantakusumakar Rasa, Brihta Bangeshwar Rasa, Suvarna Banga, Apurvamalinivasant Rasa, Harishankar Rasa, Panchanana Rasa.*
- (h) *Kwatha (Decoction) - Phalatrikadi Kwatha, Darvyadi Kwatha, Vidangadi Kwatha, Triphaladi Kwatha.*

**Diabetes can be controlled by giving attention to three aspects<sup>16</sup>:**

- *Ahara*
- *Vihara*
- *Aushadha*

The role of *ahara* and *vihara* are equally or even more important than drugs in order to control blood sugar level as well as to prevent complication of this disease.

**Cereals-Yava**–Barley (*Chenopodium album*), *godhooma*- Wheat, *Shyamaka*, *kodrava*, *bajara*.

**Pulses**- Mainly beans- *Mudga (Green-gram)*, *Chanaka (Bengal gram)*.

**Vegetables** - *Thiktha shakas*, *Methika (Trigonella foenum-gracum)*, *Nimba (Azadirachta indica)*, *Karavella (Momordica charantia)*, *Patola (Trichosanthes anguina)*, *Rasona (Garlic)*, *Udumbar (Ficus racemosa)*.

**Fruits**- *Jambu (Syzygium cumini)*, *Talaphala (Borassus flabellifer)*, *Bilwa (Aegle marmelos)*.

**Pathya and Apathya<sup>17</sup>** - *Shyama*, *Kodrava*, *Uddalika*, *Godhooma*, *Chanaka*, *Aadak* and *Kullatha* which are old- are suitable to be used as foods by patients of *Madhumeha* (Diabetes). Vegetables of bitter taste (*Thiktha*), meat of animals and eggs of birds of deserts like regions (*Jangala mamsa*), boiled *Yava* and its preparations, *Mudga*, *Shali*, and *Shastika* are all suitable as foods.

*Shauviraka* (fermented gruel), *Sura* (beer), Buttermilk, oils, milk ghee, *jaggery*, foods processed with sour sugarcane juice, food prepared from flour, meat of animals of marshy regions should be avoided from use.

**Yoga** - Yoga improves all sorts of metabolism in the body. So diabetics should perform

different types of yoga. Yoga will definitely help diabetes mellitus. Yoga now-a-days has attracted the attention of Western people. Common *Asana* that can be very effective in Diabetes are *Pranayam*, *Trikonasan*, *Mayurasana*, *Surya-namaskar*, and *Dhanuraasan*.

**Exercises-** Brisk walking, jogging, bicycling, swimming.

## DISCUSSION

Diabetes mellitus is a life-style disorder. It is of two types- Type I DM and Type II DM. The description of *Madhumeha* is the specific contribution of *Acharya Charka* as well as *Acharya Susruta* and *Acharya Vagbhatta*. He has included it in *Astamahagad*. The clear cut cause of disease is still unknown. In *Ayurveda*, *Prameha* is broadly classified in *Kaphaj Prameha* (10), *Pittaj Prameha* (6) and *Vataj Prameha* (4). *Prameha* is *Kapha-Medo pradhan* disease. In *Ayurveda*, treatment and treatment therapies are described uniquely for every person and special contribution in etiopathogenesis of *Prameha*.

## CONCLUSION

Diabetes Mellitus is a metabolic disease and urinary disorder and described as *Madhumeha* in *Ayurvedic*. Two type of clinical presentation are seen *Krishna Pramehi* (Type-I diabetes mellitus) & *Sthula Pramehi* (Type-II diabetes mellitus). *Ayurvedic* principles of management can help the patient to have better blood sugar control and routine life inspite of modern management methods. Various researches on drugs like *Shilajit*, *Giloya*, *Vijayasara*, *Haritaki*, *Manjistha* & formulation have shoves promising results in patient. In addition life style modification with adopting proper food

habits, yoga & exercise have very important role in the management of *Prameha* (Diabetes Mellitus).

## REFERENCES

1. Text book of Pathology by Harsh Mohan; Jaypee Brothers Medical Publishers (P) Ltd.; 6<sup>th</sup> edition 2010; page no. 819.
2. Astanga Hridayam of Vagbhatta; Kaviraja Atrideva Gupta; Chaukhambha Prakashan; reprint 2015; page no. 347.
3. *Madhva Nidana Madhavkara; Madhukosha* by Srivijayarakshit and Srikanthadatta; Edition- reprint, 2005; Page no.1
4. Astanga Hridayam of Vagbhatta; Kaviraja Atrideva Gupta; Chaukhambha Prakashan; reprint 2015; page no. 347.
5. Charka- Samhita Agnivesha; English translation; Sharma P.V. (Vol. 1); Chaukhambha Orientalia Varanasi; Ninth edition 2005; Page.no.269.
6. *Madhva Nidana Madhavkara; Madhukosha* by Srivijayarakshit and Srikanthadatta; Edition- reprint, 2005; Page no. 7-8.
7. *Madhva Nidana Madhavkara; Madhukosha* by Srivijayarakshit and Srikanthadatta; Edition- reprint, 2005
8. *Susruta Samhita of Maharishi Susruta* by Kaviraja Ambika Dutta Shastri; Part I; Chaukhambha Sanskrit Sansthan, Varanasi, Edition Reprint, 2012, Page no. 75 (*chikitsa sthana*).
9. Text book of Pathology by Harsh Mohan; Jaypee Brothers Medical Publishers (P) Ltd.; 6<sup>th</sup> edition 2010; page no. 819.
10. Bhavaprakash of Bhavmishra, Pandit Brahma Sankara Misra,(vol.2) Chaukhambha Sanskrit Sansthan, Varanasi, Ninth edition 2005, Page no. 394.

11. The Principles and practice of Kayachikitsa; Dr. Babu S. Suresh; vol-3; Chaukhambha Orientalia, Varanasi; Edition: 2009; Page no.-105.
  12. *Madhva Nidana Madhavkara; Madhukosh* by Srivijayarakshit and Srikanthadatta; Edition- reprint, 2005; Page no. 119.
  13. Kaya chikitsa, Sharma Ajay Kumar (vol.2), Chaukhambha Orientalia, Varanasi, Reprint edition 2013; page no.902.
  14. Bhavaprakash of Bhavmishra, Prof. Murthy K.R. Shrikantha,(vol.2) Krishnadas Academy, Varanasi, First edition 2000, Page no. 491.
  15. Kaya chikitsa, Sharma Ajay Kumar (vol.2), Chaukhambha Orientalia, Varanasi, Reprint edition 2009; page no.903.
  16. Kaya chikitsa, Sharma Ajay Kumar (vol.2), Chaukhambha Orientalia, Varanasi, Reprint edition 2013; page no.902.
  17. Bhavaprakash of Bhavmishra, Pandit Brahma Sankara Misra,(vol.2) Chaukhambha Sanskrit Sansthan, Varanasi, Ninth edition 2005, Page no. 397.
- 

**Source of Support: Nil**  
**Conflict Of Interest: None Declared**

How to cite this URL: Pratibha Et Al: A Review Article On Diabetes Mellitus- An Ayurvedic Approach. International Ayurvedic Medical Journal {online} 2017 {cited May, 2017} Available from:  
[http://www.iamj.in/posts/images/upload/1670\\_1676.pdf](http://www.iamj.in/posts/images/upload/1670_1676.pdf)