

‘A Review Article on Madhumeha (Type 2 Diabetes Mellitus) and its Ayurvedic Management’

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ABSTRACT-

Madhumeha, a term derived from the ancient Indian medical system of Ayurveda, is a chronic metabolic disorder that closely parallels the modern medical condition known as diabetes mellitus. This paper aims to explore the concept of Madhumeha in classical Ayurvedic texts and its correlation with diabetes mellitus as understood in contemporary medical science. Madhumeha, classified under Prameha (a group of urinary disorders), is characterized by the presence of sweet urine and a host of systemic symptoms. Ayurvedic literature attributes the etiology of Madhumeha to factors such as poor dietary habits, sedentary lifestyle, genetic predisposition, and psychosomatic stress, leading to an imbalance in the body's doshas (primarily Vata and Kapha) and impairment of Agni (digestive fire). This imbalance results in the improper metabolism of carbohydrates and other vital nutrients, causing elevated blood sugar levels and associated complications. Therapeutic approaches in Ayurveda for managing Madhumeha involve a combination of dietary regulations (Pathya-Apathya), lifestyle modifications (Dinacharya and Ritucharya), herbal medications (e.g., Guduchi, Haridra, and Neem), and yoga practices. These interventions aim to restore the balance of Doshas, enhance the function of Agni, and reduce blood sugar levels, thereby mitigating the long-term complications of the disease.

KEYWORDS-Madhumeha, Diabetes Mellitus, Prabhutavilamutrata

I. INTRODUCTION-

In view of Ayurveda “Prabhutavilamutrata¹”-means increased frequency of Micturation and increased urinary output and turbid secretion of urine. Acharya Charak, Sushrut and Vagbhata have describes Prameha as one of the ‘Ashtamahagada Vikara^{2,3}’. Prameha is called as Mahagada. It is difficult to cure. Madhumeha, derived from “Madhu” (honey) and “Meha” (urine), implies a condition where urine is sweet like

honey⁴. Ayurveda classifies Prameha into 20 types based on the predominance of Doshas (Vata, Pitta, and Kapha). Madhumeha is primarily a Vata type, but it is considered the resultant stage of untreated Kapha and Pitta types of Prameha. If a person follows etiological factors like sedentary habits, sleep, curds, soup of meat of domesticated and aquatic animals and animals inhabiting marshy land, milk preparation, freshly harvested food articles, freshly prepared alcoholic drinks, preparation of jaggery and all kapha aggravating factors, then there is an excessive increase in vitiated Kapha, Pitta. These vitiated Kapha, Pitta in turns effect the Jathragni and Dhatwangni and disturbs metabolism and produce excess of disorganised quality of Rasa, Meda, Kleda, Vasa, Lasika, Mansa etc. All these vitiated Dushyas obstruct the path of Vata and due to obstruction, Vata gets aggravated and change its path and carries vital Dhatu towards Basti and excretes them out. In India, there are estimated 77 million people above the age of 18 years are suffering from diabetes type 2 and nearly 25 million are pre-diabetics (at a higher risk of developing diabetes in near future). India is often referred to as the ‘Diabetes capital of the world’. India ranks second after china. One in six people (17%) in the world with diabetes is from India. In 2021, According to International Diabetes Federation-Approximately 537 million adults (20-79 year) are living with diabetes. The total number of people living with diabetes is projected to rise to 643 million by 2030 and 783 million by 2045. Diabetes is responsible for 6.7 million death in 2021-1 in every 5 seconds^{5,6}. Madhumeha can be co-relate with Diabetes Mellitus. It is chronic metabolic syndrome characterised by “Hyperglycemia” due to deficiency or defective response of insulin.

DEFINITION⁷-

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Excessive or frequent and often lumpy urination is called Prameha (Diabetes).

NIDANA⁸-

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The main cause of Madhumeha are addiction to the pleasure of sedentary habits, sleep, curds, soup of meat of domesticated and aquatic animals and animals inhabiting marshy land, milk preparation, freshly harvested food articles, freshly prepared alcoholic drinks, preparation of jaggery and all Kapha aggravating factors are responsible for the causation of Prameha

SAMPRAPTI⁹-

हेन fiUka p esn'p ekala pkfrizo/kZrsAA

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;nk cflra rnk d'PN'ks e/kqesg% izorZrsA (p-lq-17@79&80)

If the persons follows the above things then, there is an excessive vitiation in Kapha, Pitta, Meda (adipose tissue), Mansa (muscles tissue), the path of Vata is obstructed thereby and so the Vata together with the Ojas comes down to reach the Basti (urinary bladder including kidney) causing an obstinate type of disease called Madhumeha.

SAMPRAPTI GHATAK¹⁰-

- Dosha- Kapha Pradhan Tridosha
- Dushya- Meda, Mansa, Kleda, Shukra, Shodita, Vasa, Majja, Lasika, Rasa, Oja
- Srotas- Medovaha Srotas, Mutravaha Srotas
- Strotodushiti- Sanga, Atipravrutti
- Adhishthan- Basti
- Agni - Manda
- Swabhava – Chirkari
- Sadhya Asadhyata – Yapy/Asadhya

CLASSIFICATION-

- According to Acharya Charak¹¹, patients suffering from Prameha can be classified into 2 categories, viz 1-Sthool Pramehi i.e. obese and strong 2-Krichra Pramehi i.e. emaciated and weak

- Sthoolpramehi** should be administered Samshodhan Chikitsa (Elimination Therapy)
- Krichrapramehi** should be given Brimhana Chikitsa (Nourishing Therapy), Sanshaman

Chikitsa. Due To Less Power Of Patient Therefore Krichrapramehi is Krichrasadhya or Asadhya.

- According to Acharya Sushrut¹², also Prameha is of 2 types.

- Sahaj Prameha (Hereditary)
- Apathyanimittaja Prameha (unwholesome diet)

Acharya Sushrut while narrating aetiology describes that the body constitution of Sahaj Prameha is generally Krichra (thin) and Apathyanimittaja Prameha is Sthool (obese)

- According to Vagbhata¹³, Prameha is of 2 types. 1-Dhatukshayajanya and 2-Avaranajanya.

Even though the 3 groups are described there is vitiation of all the three Doshas in all Pramehavyadhi. 10 types of Kaphaj, 6 types of Pittaj, 4 types of Vata¹⁴.

Diabetes is of 2 types –

- Type 1 Insulin dependent diabetes mellitus (IDDM)
- Type 2 Non insulin dependent diabetes mellitus (NIDDM)

Type 1 Diabetes Mellitus- 10-20% case of Type 1 Diabetes Mellitus. It develops in early stage of life generally below 14 years.

Type 2 Diabetes Mellitus- More common, 80-90% case of Type 2 Diabetes Mellitus. It develops in middle age or above 40 years

PURVAPUPA¹⁵-

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1. Dant malyukta
2. Burning sensation in palm and feet
3. Smooth and shiny body
4. Polydipsia
5. Sweetness in mouth

RUPA¹⁶-

lkekU;a y{k.kars''kkaizHkwrkfoyew=rk A((अष्टांग हृदय निदान (10/6))

Excessive passage of turbid urine.

MAJOR RISK FACTOR FOR TYPE-2 DM-

1. Family history of type-2 DM

2. Obesity
3. Habitual physical activity
4. Race & ethnicity (black Asians)
5. Previous identification of impaired fasting glucose
6. History of gestational DM
7. Hypertension
8. Dyslipidemia
9. Polycystic ovarian disease (PCOD) & acanthosis nigricans
10. History of vascular disease

- A. Acute Metabolic Complications
 1. Diabetic Ketoacidosis (DKA)
 2. Hyperosmolar Hyperglycemic Non Ketonic Coma
 3. Hyperglycemia
- B. Late Systemic Complications
 1. Atherosclerosis
 2. Diabetic Microangiopathy
 3. Diabetic Neuropathy
 4. Diabetic Nephropathy
 5. Diabetic Retinopathy
 6. Infection

COMPLICATION-

INVESTIGATION-

1. BLOOD SUGAR LEVEL-

✓ **Fasting (for >8 hours) Blood sugar level**

Plasma glucose value	Diagnosis
Below 100mg/dl (below 5.6 mmol/l)	Normal fasting value
100-125 mg/dl (5.6-6.9 mmol/l)	Impaired fasting glucose (IFG)
126 mg/dl (7.0 mmol/l) or more	Diabetes mellitus

✓ **Post Prandial Blood sugar level**

Plasma glucose value	Diagnosis
Below 140mg/dl (below 7.8 mmol/l)	Normal post prandial value
140-199 mg/dl (7.8-11.1 mmol/l)	Impaired post prandial glucose
200 mg/dl (11.1 mmol/l) or more	Diabetes mellitus

2. URINE TEST-

- A. Glycosuria - Sugar present in urine in severity of DM
- B. Ketonuria - Ketone bodies present in urine severity of DM

3. OTHER TESTS-

- A. Glycosylated Haemoglobin - Normal value 4-6%, >6% in DM
- B. Lipid profile
- C. Kidney profile every year
- D. ECG - To Heart checkup (blood urea and serum creatinine)
- E. Fundus examination for Eye check up

CHIKITSA-

1-Nidana Parivarjana¹⁷-

Withdrawal of the etiological factors of the disease is called Nidana Parivarjana. Acharya Sushrut mentioned Nidana Parivarjana as the first line of treatment of all the disease.

2-Samshodhan Chikitsa¹⁸-

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lac`ag.kar™k d`kL; dk;}
 la'kks/kuanks''kcykf/kdL; AA(p-fp- 6@15)

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3-Samshaman Chikitsa¹⁹-

- i. **Rasa/Bhasma/Pisti- Matra-125mg, Anupana-water**
 Vasant Kusumakar Rasa, Tarkeshwar Rasa, Swarna Vang Bhasma, Trivang Bhasma,
- ii. **Vati-Matra- 250-500 mg, Anupana-lukewarm water**
 Shiva Gutika, Chandraprabha Vati, Trikatu Gutika, Shilajitwadi Vati
- iii. **Churna- Matra- 3-6 gm, Anupana-lukewarm water**

NyogrodhadyaChurnai, TriphalaChurnai,

iv. Kwath/ Asava/ Arista-Matra- 20-30 ml, Anupana

PhalatrikadiKwath, DavryadiKwath,
TriphaladiKwath, Salsaradi Gana Kwath,
Lodhrasava

v. Ghritha-Matra- 10-30ml, Anupana-lukewarm water

DhanwantarGhritha, DadimadhaGhritha,
TrikanadhaGhritha

vi. Avleha/ Paka-Matra- 15-20gm, Anupana-Milk

Salsaradi Leha, Kushavaleha, Vangavaleha

vii. Udaka (Jala)-Sarodak, Kushodak, Madhudak, Sidhu, Madhwika, Triphala Rasa

viii. Rasayanaprayoga- AamlakiRasayana, ShilajatuRasayana, GugguluRasayana,

ix. Akala Aushada-Palandu, Methi, Nimba, Meshshringi, Bilva, Kalvellak, Jambo

PATHYA-APATHYA²⁰-

PATHYA

- Shooka Dhanya (Grains)- Yava, Godhuma
- Shami Dhanya(Legumes)- Chanaka, Kulattha, Mugdha
- Vegetables- Patola, Shigru, Methika, Karvellak
- Vyayama(Physical exercise)
- Asanas-Vajrasana, Pacchimotasan, Ardha Matsyendrasana
- Pranayamas- Kapalbhathi, Bhramari, Bhastrika.
- Chankraman(Brisk walking)
- Surya Namaskar
- Adequate sleep for 6 to 8 hours at night

APATHYA

- Shooka Dhanya (Grains) – Shali (Rice), Navinadhanya (Freshly harvested grains)
- Shami Dhanya (Legumes) - Masha
- Mansa -Gramyamansa (meat of domestic animal), Oudakamansa (aquatic animals), Anupa mansa (Marshy land)
- Milk Preparations - Payasa, MandakaDadhi (curd)
- Pana(Drinks) –Ikshurasa(sugarcane juice)
- Fruits – Mango, Banana, Papaya, Jack fruit, pineapple, Dry fruits
- Vegetables – Aluka (Potato)
- Aasyasukha
- Swapnasukha(long duration of sleep)
- Madyapana(comsumption of alcohol)
- Divaswapana (sleeping in day time)

II. CONCLUSION-

Madhumeha (Diabetes Mellitus) can be managed conservatively through adjustments in diet, exercise, medication, and lifestyle. A similar disease has been described in modern medical sciences as Diabetes Mellitus. Which has been turned out to be the considerable silent killer today within the world. In Ayurveda so many drugs have been mentioned which are found useful in the treatment of Diabetes. Recent research in Ayurveda has also proved the efficacy of various herbal and herbal drugs in Diabetes. Which are quite safe for long term use, but these drugs are effective only in mild to moderate diabetics that too become ineffective on long term use. To treat a Madhumeha Patient, a physician must have complete knowledge of different aspects of Madhumeha like Nidana, Samprapti, Poorvaroop, Roopa, and several Chikitsa Yoga, Sadhyaasadhyta, Arishtalakshanetc. from all Samithas, Nighantu, and other literature. Insulin is only first line of treatment for type 1 Diabetes. Diabetes is not cured permanently even after taking allopathic medicines continuously, the control of sugar also remains for some time, regular intake of allopathic medicines reduces its working and then insulin has to be taken which has more side effects eg: Neurological problems, Cardiac problems, Blurring of vision, Disturb kidney function. Ayurvedic Medicines are used to avoid all this.

Benefits of Ayurvedic Medicines-

1. Ayurvedic Medicines are eco-friendly.
2. There are no side effects inside or outside the body.
3. 14 system of body improves.
4. Normalise Agni and Metabolism of body.
5. Other diseases also do not arise in the body, even other diseases may cure after reducing the sugar level of blood.

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