

A CRITICAL REVIEW ON MADHUMEHA (DM TYPE-2) A LIFE STYLE DISORDER**Dr. Subhas Kumar Sahani*¹, Dr. Ramnihor Tapsi Jaiswal² and Dr. Manohar Ram³**¹Post Graduate Scholar, Department of Samhita evum Siddhanta, Rajkiya Ayurvedic College and Hospital, Varanasi.²Associate Professor, Department of Samhita evum Siddhanta, Rajkiya Ayurvedic College and Hospital, Varanasi.³Associate Professor and H.O.D, Department of Samhita evum Siddhanta, Rajkiya Ayurvedic College and Hospital, Varanasi.***Corresponding Author: Dr. Subhas Kumar Sahani**

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ABSTRACT

Madhumeha is also known as diabetes mellitus -Type-2 in the world. Madhumeha is clinically describe in Ayurveda under the type of Vataj Prameha. In this disease the patient passes excess urine which is sweet, astringent in taste, slightly turbid and pale in colour. Madhumeha can be correlated with modern medical science as diabetes mellitus. Now a days it is known as silent killer. In Ayurveda it is described in Vataj Prameha and can be managed with modification in diet, exercise, medication. Ayurveda is an ancient Indian health care system that has been practiced since beginning of civilization. According to Acharya Charak, Arogya is necessary for reaching Purushartha Chatushtaya. The principle of Dinacharya, Ritucharya, Sadvritta and Achara Rasayan, as well as suggestion for a balanced diet and lifestyle are well known in Ayurveda but few individuals are able to follow them well in the contemporary situation. As a result, lifestyle illness such as DM has become most serious and increasing dramatically worldwide. Type-2 diabetes is responsible for about 80% of the cases. Clinical symptoms and prognosis of Madhumeha are similar to diabetes mellitus. Some ayurvedic drugs like Chandraprabha, Gudmar, Asana, Musta, Shilajit, Khadir, Vacha, Guduchi, Jambu, are effective in Madhumeha. Modern medicine has its limits, however ayurvedic management can help patients regulate their blood glucose levels and change their Habbit.

KEYWORDS: Diabetes Mellitus, Madhumeha, Prameha, Vataj.**INTRODUCTION**

Prameha has been mentioned that it is a group of disorders in which there is an increased frequency of micturition, the volume of urine is also increased, and the urine becomes turbid. Acharyas have explained that in Madhumeha there is vitiation of Vata Kapha Pradhana Tridosha associated with Meda and other Dhatus along with Ojas as Dushya which comes out of the body through Mutravaha Srotas. A similar disease has been described in modern medical sciences as Diabetes Mellitus. Type2 Diabetes Mellitus (DM) refers to a group of metabolic disorders characterized by chronic hyperglycaemia, polyuria, polydipsia, polyphagia, emaciation, and weakness due to disturbance in carbohydrate, fat and protein metabolism associated with a relative or absolute deficiency in insulin secretion and/or insulin action.

Globally approximately 422 million adults are suffering from Diabetes Mellitus, according to the latest 2016 data of the World Health Organization. The prevalence of Diabetes Mellitus is increasing quickly; the previous year

of 2013, according to the International Diabetes Federation put the number at 381 million people having Diabetes. (The number is projected to be almost double by 2030. Among the several health disorders, diabetes and its complications account for a massive hazard to future public health resources all over the globe. Ayurvedic formulations are used to treat a wide variety of diseases including Type 2 Diabetes Mellitus described as Madhumeha in Ayurvedic texts. In Allopathic practice, most of the hypoglycemic agents used to treat Type2 Diabetes Mellitus and hyperlipidemia are reported to have side effects on long term use. Hence, there is the necessity to look for effective and safe drugs for these health problems.

AIM AND OBJECTIVES

To study and review the concept of Prameha/Madhumeha Roga, from different Ayurvedic literature.

MATERIAL AND METHOD

Material Review of literature is presented hereafter thorough study of Ayurvedic classics, journals, internet and the latest research papers published in its context and compiling references from Ayurvedic as well as Modern Medical texts and previous research work on this subject.

REVIEW OF LITERATURE

परिभाषा

प्रमेह

प्रकर्षेण प्रभूतं प्रचुरं बारं बारं वा मेहतिसूत्र

त्याग करोति यस्मिन् रोगे स प्रमेहः । (माधवनिदान)

Excessive or frequent and often lumpy urination is called Prameh (diabetes).

मधुमेह

The disease in which the patient passes urine like honey and sweetness remains in the body is called diabetes. That is, the disease in which there is erosion of urine of honey-like quality and color or urine containing sweet juice is called diabetes.

NIDANA

आस्यासुखं स्वप्नसुखं दधीनि ग्राम्यौदकानूपरसाः पर्यासि ।

नवान्नपानं गुडवैकृतं च प्रमेहेहेतुः कफकृच्च सर्वम् ॥ (च.चि. 6/4)

Asyasukham - Comfortable seating (luxury, sedentary lifestyle, lack of physical activities and exercise),
Svapnasukham - comforts of sleeping, excess sleeping,
Dadhini-eating curd in excess,
Gramyaudakanupa rasaah- meat of domestic, aquatic and marshy land animals, Excessive intake of milk products,
Navannapaanam—vested grains & freshly prepared alcoholic drinks,
Gudavaikritam- jaggery preparations or sweets,
Kaphakrut Cha Sarvam - All diet and sedentary lifestyle activities which increase Kapha Sahaja (inherited factor).

PURVARUPA

“दन्तादीनां मलाद्वयत्वं प्रागूपं पाणिपादयोः । दाहचिक्कणता देहे तृट्स्वाद्वस्त्रं च जायते ॥”

(माधव निदान 33/5)

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

RUPA (Clinical Features)

1. Avila prabhuta mutra- Excessive passage of turbid urine.
2. Increased frequency of urine (Polyuria)
3. Increased appetite (Polyphagia)
4. Excessive thirst (polydipsia)
5. Turbidity in urine
6. Debility/ tiredness
7. Weight loss
8. non-healing ulcer
9. Visual disturbances
10. Inflammation of glans penis

In elderly patients with diabetes, the presentation of symptoms may be significantly different from the classic triad of polyphagia, polyuria, and polydipsia and weight loss. They may present with anorexia, failure to thrive, loss of motivation, fatigue, anorexia, failure to thrive, loss of motivation and difficulty in concentration.

SAMPRAPTI (Pathogenesis)

Madhumeha can originate in two ways

1. Avaranjanya (By the obstruction of Vata caused by Doshas covering it)

2. Dhatukshayajanya (Depletion in body tissues causes aggravation of Vata)

In Avaranjanya Madhumeha the vitiated Kapha Dosha and Meda Dhatu (Fat tissue) obstruct the passage of Vata Dosha. In the process of manifestation of Madhumeha, the obstructed Vata is vitiated again and carries Oja to Basti (Urinary Bladder).

Dhatukshayajanya Madhumeha (Diabetes caused by depletion in body tissues causes aggravation of Vata) manifests as a thin and asthenic individual due to loss of Oja. All this is Ojakshaya meaning an imbalance in Oja.

Vitiating factors involved in pathogenesis.

कफः सपित्तः पवनश्च दोषा मेदोऽशुक्राम्बुवसालसीकाः ।

मज्जा रसौजः पिशितं च देष्याः प्रमेहिणां विशतिरेव मेहाः ॥ (Ch. Chi 6/8)

Doshas (Kapha, Pitta and Vata) and Dushyas like Medas (fat tissue), Rakta (blood tissue), Shukra (semen), Ambu (body fluid), Vasa (muscle fat), Lasika (lymph), Majja (bone marrow tissue), Rasa, Ojas (immunity) and Mamsa (muscle tissue) are responsible for the causation of Prameha which is of twenty types.

Classification

1. Etiological (Sh.Ci.11/3)

- a) Sahaja or Kulaja (Hereditary)
- b) Apathyanimittaja (Acquired)

2. Clinicopathological (Doshik)(A.H.Ni.10/1)

- a) Kaphaj - 10 types
- b) Pittaj - 6 subtypes
- c) Vataj - 4 subtypes

3. Constitutional

- a) Sthula or Balvana (Obese Type2DM)
- b) Krisha or Daurbalya (Asthenic Type1DM)

4. Prognostic

- a) Sadhya (Curable)
- b) Yaapya (Pallable)
- c) Aasadhya (Incurable)

Risk factors

1. Family history
2. Obesity (BMI > 27kg/ m2)
3. Age > 45 years
4. Hypertension (B.P. > 140/ 90 mm of Hg)

5. HDL < 35mg/ dl and/ or triglycerides levels > 250mg/ dl
6. Habitual physical inactivity

Complications

The following complications may occur in the later stage of Diabetes mellitus:

1. Burning sensation over palmar and plantar region (Diabetic neuropathy)
2. Boils and carbuncles
3. Gangrene
4. General debility
5. Retinopathy
6. Renal tissue damage (nephropathy)
7. cardiovascular diseases.

Investigations

- i. Measurement of the plasma glucose level
 - a. Random blood sugar (RBS)
 - b. Fasting blood sugar (FBS)
 - c. Postprandial blood sugar (PPBS)
- ii. Urine routine and microscopic
- iii. Glycosylated Hemoglobin (HbA1c)
- iv. Lipid Profile

Other related Investigations

- i. Blood urea and serum creatinine
- ii. E.C.G.
- iii. Fundus examination
- iv. Serum electrolytes.

Diagnostic Criteria for the Diagnosis of Diabetes Mellitus

1. Fasting: -
 - Normal- < 110 mg/dl
 - Impaired fasting glucose level > 110 and < 126 mg/dl
 - Diabetes mellitus- \geq 126 mg/dl
2. Random plasma glucose level > 200 mg/dl (or)
3. Two hours prandial glucose level > 200 mg/dl
 - Normal- < 140 mg/dl
 - Impaired glucose tolerance level- > 140 and < 200 mg/dl
 - Diabetes mellitus- > 200 mg/dl with symptom

The diagnosis is made by collaborating symptoms and plasma glucose levels.

Management approaches

Prevention of Prameha

येहेतुभिर्यं प्रभवन्ति मेहास्तेषु प्रमेहेषु न ते निषेव्याः ।

वा विहिता यथैव जातस्य योगस्य भवेत्चिकित्सा ॥(Ch-Chi: 6/53)

The causative factors responsible for the manifestation of different types of Prameha should be avoided.

A. Some Preventive Methods

1. Usage of Yava (barley), Mudga (green gram), pumpkin, cucumber, old rice, bitter gourd, drumstick, Methi (fenugreek), Patola (snake gourd), Bimbi,

watermelon, buttermilk, Triphala etc. is beneficial as preventive measures for diabetic Mellitus patients.

2. Dinacharya (daily regimen) and Ritucarya (seasonal regimen).
3. Control in Carbohydrates intake.
4. Daily Exercise (Brisk walking, swimming etc- 30 minutes for 4-5 days/week.)
5. Regular consumption of Rasayana drugs (Amalaki rasayana etc.)
6. Restriction in intake of sugar/ sugar products, dairy products and fried food.
7. Restriction in the intake of different types of wine, cakes, excess use of oil, clarified butter, milk, sugarcane products and the meat of domestic and aquatic animals
8. Avoidance sleep during daytime.

B. medical management

Line of treatment

1.Nidana parivarjana (Avoidance of causative factors)

Avoidance of fat, carbohydrate, sugar, tubers, sweets, dairy products, soft drinks, fried foods and sweet fruits like mango, banana, custard apple and date.

2. Specific Therapies

Chikitsa Sutra

स्थूलः प्रमेही बलवानिहैकः कृशस्तथैकः परिदुर्बलश्च ।

संबृहणं तत्र कृशस्य कार्यं संशोधनं दोषबलाधिकस्य ॥ (Ch. Chi. 6/15).

If a diabetic patient is having obesity, then Samshodhana chikitsa (bio-purification therapies) like- Vamana (emesis), Virechana (purgation) and Basti (enema) are to be performed after proper assessment of the patient. If a diabetic patient is lean and thin, then only Shamana chikitsa (Palliative therapy) should be recommended.

Drug therapies

In Ayurveda, mostly drugs indicated in diabetes mellitus regulate the glycaemic index

by their action on beta-cell of pancreas thus improving insulin production/increasing insulin sensitivity.

The following drugs/ formulations are useful to control type II diabetes mellitus which can be correlated with Madhumeha as described earlier. In type I diabetes mellitus, these drugs can be used as supportive therapy in addition to conventional insulin therapy to prevent long term complications.

Various Shamyoga which can be used in treatment of Madhumeha

- **Dravya yoga-** Salsaradi Nyagrodhadi
- **Swarasa-** Bilavapatra. Guduchi, Satavari, Haridra, Amalaki
- **Choorna-** Mammajak, Nimba, Jambu Beeja, Eladi Nyagrodhadya. Amalaki, Haridra
- **Kwatha-** Phalatrikadi, Asanadi, Mustadi, Triphaladi. Vidangadi (Y.R.)
- **Gutika-** Chandraprabha, Gokshuradi guggulu

- **Avaleha-** Bangavaleha, Salaradhi. Kushavaleha.
- **Paka-** Puga paka, Aswagandha pak (Y.R.)
- **Ghrita-** Dhana Vata r. Trikantakadhya, Mahadadi
- **Asava-arishtha-** Lodhrasava. Dantyasava, Jambvasa Loharista, Devadarvyarist.
- **Rasaushadhi-** Shilajit, Trivanga, Swarnamakshika, Vasantkusumakar, Indravati, Bhrihatbangeshwarrasa, Chandrakalarasa, Pramehagajakeshari, Pramehantak.

Pathya Ahara Dravya

• **Shooka Dhanya [Grains]:** Shashtika, Shali, Yava, Godhuma, Kodrava, Shyamak, these must not be newly harvested.

• **Shami Dhanya [Pulses]:** Chanaka, Adhaki, Kulattha, Mudga.

• **Shaka [Vegetables]:** Fresh herbs described under Tikta-varga and Kashaya- Varga.

• **Mamsa [Non-Veg]:** Jangala mamsa which is Laghu in nature e.g., Mriga, Dvija Mamsa which is Jangala in origin, Vishkira and Pratuda Mamsa. These Mamsa must be Shulya i.e., roasted with the help of Shulya [Tandoor]. Mamsa of Kapota, Shash, Tittir, Lava, Bahir, Bhringraj, Vartak, Shuk etc.

• **Taila [Oils]:** Nikumbha, Ingudi, Sarshapa, Atasito prepare different food preparations.

• **Pana [Drinks]:** Sarodaka, Kushodaka, Madhudaka, Triphala Rasa, Sidhu, Sura, properly prepared Madhvika which is having premium quality and has fermented for a long time.

Apathy Ahara Dravya

A diet that is responsible for the genesis of Prameha can be listed under Apathya Ahara.

• **Shooka Dhanya [Grains]:** Hayanaka, Chinaka, Yavaka, Naishadha, Itkata, Mukunda, Pramodaka, Sugandhaka. Freshly harvested grains.

• **Shami Dhanya [Pulses]:** Harenu, Masha- must not be freshly harvested and must not be taken with ghee.

• **Mamsa [Non-Veg]:** Gramya Mamsa, Anupa Mamsa, Audaka Mamsa.

• **Milk preparations:** Payasa, Ksheera, Manaka and Dadhi.

• **Alcoholic preparations:** Recently prepared Madya and other drinks which are sweets.

• **Others:** Tila, Palala, Pishtanna, Krishara, Vilepi, Kushmanda, Ikshu and Ikshuvikara, Shaka which are not mentioned in Pathya group.

3. Yogic practices

Certain yogic postures are believed to stimulate the pancreas and improve its function. Some yogic practices are effective in Diabetes mellitus; still, these yogic postures should be performed only under the guidance of a qualified yoga therapist. The duration of each yoga should be decided by the Yoga therapist.

- Katiichakrasana, Tadasana, Pavanamuktasana, Gomukhasana, Shalabhasana, Vakrasana, Shashankasana, Dhanurasana, Mayursana, Pashchimottanasana, ushtrasana etc.

- Bhastrika, Bhramari, Suryabhedana pranaama.
- Kunjala, shankhakha prakshalana, Vastra dhauti.

4. Rasayana Chikitsa

• Acharya Sushruta and Vagbhata has described Shilajita Prayoga for Madhumeha as a Rasayana Chikitsa.

• Acharya Sushruta in addition to Shilajita has also described "Swarna- makshika Prayoga' in Madhumeha.

• According to Vagbhata, it is a very potent drug and has rejuvenating power which gives better results even in those Madhumehi patients who are labelled as incurable.

5. Counselling

Advice the patient to

1. Do physical activity at least 30 - 60 minutes for 4-5 days per week.

2. Increase the use of barley, wheat, Mudga and roasted chana (Bengal gram) in the diet

3. Control the use of sugar, potato, rice, milk, milk products and oily foods

4. Take care of personal hygiene especially of feet and hand

5. Avoid any kind of injury and if occur then immediately consult in case of injuries/ skin infections

6. Avoid the consumption of tobacco and liquor in any form.

7. Restrict or inhibit sweet intake.

8. Regular medical checkup and blood glucose level monitoring.

a. Do Glycosylated hemoglobin (HbA1c) test thrice in a year

b. Eye examination annually

c. Foot examination twice in a year/ daily by the patient

d. Renal function screening yearly

e. Blood pressure quarterly

f. Lipid profile annually

g. Cardiac check-up once annually

Indications for referral

a. Renal failure, severe infections

b. Associated with complications (diabetic foot, coronary artery disease, diabetic nephropathy, diabetic neuropathy, diabetic retinopathy etc.) and nonresponse to medication practice of Ayurveda. 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, Roopa, Poorvaroop, Samprapti, and several Chikitsa Yoga, Sadhyaasadhya, Arishtalakshan etc. from all Samithas,

Nighantu, and other literature.

DISCUSSION

Madhumeha is a type of Vataj Prameha which is a disease of Mutravaha Srotasa having Kapha dominancy which can be correlated with diabetes mellitus. Diabetes is not a new disease. It has gained gigantic disgrace in recent times because of increases in the prevalence of a sedentary lifestyle and obesity. Madhumeha can be prevented through lifestyle modification, diet control, and control of overweight and obesity. The specially prepared Ayurvedic diet and lifestyle plan in the present study have all the potential to maintain the glycaemic index of Madhumeha (DM) patients. Cases of Diabetes Mellitus is increasing rapidly, because of increases in the prevalence of a sedentary lifestyle and obesity. Through appropriate use of Ayurvedic preventive measures such as Aharavidhi, Dincharya, Ritucharya and therapeutic measures Madhumeha (Diabetes Mellitus) can be prevented. The appropriate approach of diet, daily regimen, exercise, and medication can be well managed by Ayurveda.

CONCLUSION

Madhumeha (Diabetes Mellitus) can be managed conservatively with modifications in diet, exercise, medication, and lifestyle. These are all important factors in the victorious treatment of type 2 Diabetes and are assimilated into the ancient Indian medicinal practice of Ayurveda. 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, Roopa, Poorvaroop, Samprapti, and several Chikitsa Yoga, Sadhyaasadhyta, Arishtalakshan etc. from all Samithas, Nighantu, and other literature.

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