

ROLE OF AYURVEDA IN PREVENTING LIFE STYLE DISORDERS W.S.R. TO MADHUMEHA (DIABETES MELLITUS)

Dubey Ramesh Kant

Dept. of Swasthavritta, Govt. Ayurvedic College and Hospital Atarra (Banda) UP, India

ABSTRACT

Life style disorders are diseases which are associated mainly with the way a person or group of people lives. These include disorders such as hypertension, heart disease, stroke, obesity, diabetes mellitus, tobacco and nutrition-induced cancers, chronic bronchitis etc. It is estimated that the total number of people with diabetes will rise from 171 million in 2000 to 366 million by 2030 and number of adults with hypertension will increase by 60% to a total of 1.56 billion people by 2025.¹ As per WHO report, currently half a billion people (12% of the world's population) are considered obese.² A healthy lifestyle promotes building and maintaining healthy bones, muscles and joints as well as helps in controlling weight. It increases self esteem, reduces stress and promotes social well being. *Ayurveda* has great potential in preventing life style disorders. According to *Ayurveda* a healthy person is one who remains established in self along with equilibrium of *Tridosha* (three functional units in body i.e. *Vata, Pitta, Kapha*).Dietetic factors, lifestyle as well as environmental factors affect the *Tridosha*. Disease is the result of disturbance in homeostasis of *Tridosha*. This article will deal in length about the role of *Ayurveda* at different levels i.e. primordial, primary, secondary and tertiary levels of prevention of lifestyle disorders with special reference to *Madhumeha* (DM).

Keywords: *Madhumeha*, Diabetes mellitus, prevention, lifestyle

INTRODUCTION

Lifestyle may be defined as a way of living of individuals, families and societies. Lifestyle diseases include type-2 diabetes mellitus, obesity, dyslipidemia, hypertension, IBS, acid peptic disorders, heart disease, stroke, tobacco and nutrition-induced cancers, chronic bronchitis etc. Life style disorders are going to take the form of epidemic in the 21st century, if proper preventive measures are not taken. Modern system of medicine is successful in preventing diseases of infective origin

but it is difficult to prevent lifestyle diseases alone with it. It is the need of time to review the ancient systems of medicine in order to apply measures prevalent in these systems in preventing the coming epidemic of lifestyle disorders which are preventable with changes in diet, lifestyle, and environment. *Madhumeha* (Diabetes mellitus) is attracting global importance, as it is rocking the world as a non-infectious epidemic/pandemic. Although it is prevalent and known since ancient period, it is becoming more menacing

now a day due to changing food habits, life styles and increased stress in the society. Type-2 Diabetes mellitus (NIDDM) forms 95% of all diabetics. The World Health Organization (WHO) has projected that the global prevalence of type-2 DM will more than double - from 135 millions in 1995 to 300 million by 2025. The greatest increase will be in India, from 19.4 to 57.2 millions. Diabetes mellitus (DM) is the leading cause of end stage renal disease (ESRD), a major cause of non-traumatic amputations, responsible for 30% of preventable blindness and a leading cause of cardiovascular mortality.³

A vivid description of *prameha* (a disease characterized by passing of excess, frequent and dirty urine) is available in *Ayurvedic* classics where- in *Madhumeha* is considered as a subtype under the *vatika* type of *prameha* and it is characterized by passage of urine with sweet taste like honey along with sweetness of whole body.⁴

Ayurvedic texts describe various measures like *Dincharya*, *Ratricharya*, *Ritucharya*, *Adharaniya Vega*, *Sadvritta* etc along with management of diseases with natural herbs, which will force the world to look back towards the positive health care as well as prevention of diseases.

Aetiology of Madhumeha (DM)

Two factors i.e. *hereditary* and *dietetic* are generally responsible for

causing the disease *prameha* and the patients are classified accordingly as *sahaja* (inborn) *pramehi* and *apathyanimittaja* (related to dietary and lifestyle factors) *pramehi*⁵

i) Sahaja Prameha/Madhumeha

Prameha has been mentioned as a *kulaja* (familial) *vikara* (disorder) ie. It has tendency of inheritance.⁶ The over indulgence in *madhura rasa* (sweet taste) by *mother during pregnancy* is responsible for inducing *prameha* in the *child*.⁷ *Chakrapani* has also narrated that the chief cause of defect in *bija* (spermatozoa or ovum) is *apathya sevana* (improper diet intake) by the parents.⁸ The genetic predisposition and dietetic factors both play a combined role in the manifestation of *sahaja prameha* or *Madhumeha*, although it may occur independently.

ii) Apathya Nimittaja Prameha/Madumeha

The general causative factors (*samanya nidana*) of *prameha* including *kaphaja*, *pittaja*, and *vataja prameha* described in the *Ayurvedic* texts are responsible for vitiation of *dosha* leading to *prameha /Madhumeha*. Some common etiological factors are *Asya Sukha* (sedentary habits), *Swapna Sukha*, *Anup Mansarasa* (meat preparations of aquatic animals), *Nava Anna*, different preparations of *Guda* (prepared using sugar cane).

Specific etiology of Madhumeha⁹

Table 1: Specific etiology of Madhumeha

SI No	AHARA	VIHARA
	Excessive intake of	Excessive indulgence in
1.	Guru(heavy)dravya (substances)	Nidra (sleep)
2.	Snigdha (unctuous) dravya	Asya sukha (sedentary habits)
3.	Amla (Sour)dravya	Tyakta vyayama(no exercise)
4.	Lavana rasa (Salty taste)	Tyakta cinta
5.	Nava anna, Nava pana (freshly grown grains, fresh beverages)	Samsodhana akurvataam (avoiding purification therapy)

Samprati (pathogenesis) of Madhumeha

The pathogenesis of *Madhumeha* has been described at three places in *Charaka Samhita*.¹⁰ *Madhumeha* is advanced stage of other types of *prameha* which arises due to negligence of treatment according to *Sushruta*¹¹, whereas *Vagbhata* has described two types of *Madhumeha* on the basis of pathogenesis i.e. (a) *Dhatuksayajanya* and (b) *Avaranajanya*¹² The different aspect of *Madhumeha* is explained below:

1. Madhumeha due to Shuddha Vata

The pathogenesis of *Madhumeha* mentioned in *Charaka chikitsasthana* may be considered to be caused by *Shuddha vata*. *Vata dosha* gets provoked by *vatakara nidana* leading to *kshaya* (diminution) of *dosha* (*kapha*, *pitta*) and *sarabhuta dhatus* like *vasa*, *majja*, *lasika* and *oja*. *Vata* further gets provoked due to *kshaya* (diminution) of *dhatus*. This highly provoked *vata* carries *oja* towards *basti* and thus leading to *Madhumeha*.

2. Apratkarita Vatanubandhita Madhumeha

This type of *Madhumeha* is not a separate entity but it may be an advanced stage of *kaphaja* or *pittaja prameha* due to an ignored stage of *prameha* without proper treatment.¹³

3. Dhatuksayajanya Madhumeha:

Due to *kshaya* (diminution) of vital *dhatus vata* gets provoked which leads to excretion of urine resembling honey and *Madhumeha* is produced.¹⁴

4. Avaranajanya Madhumeha:

Excessive intake of unctuous substances, articles having acidic and salty taste, *guru* (heavy), *snigdha ahara* (unctuous food) etc. and indulgence in excessive sleep and sedentary habits etc. lead to excessive increase of *kapha*, *pitta*, *meda* and *mamsa* which causes *srotorodha* (obstruction) leading to *avarana* (covering) of *vata*. This vitiated *vata* carries the *oja* (vital essence) to *basti* (bladder) resulting in *Madhumeha* and appearance of the symptoms of *vata*, *pitta* and *kapha* alternately and frequently.¹⁵

Lifestyle disorders and Ayurveda

The primary aim of *Ayurveda*, the science of life, is the maintenance of optimal health and well being through a comprehensive approach that involves body, mind and environment. According to *Ayurveda* a healthy person is one who remains established in self along with equilibrium of *Tridosha* (*Vata*, *Pitta*, *Kapha*). Self is recognized by totality and wholeness of body and mind. Dietetic factors, lifestyle as well as environmental factors affect the *Tridosha* and disease is the result of disturbance in homeostasis of *Tridosha*.

Madhumeha (DM) and Ayurveda

A disease can be prevented by intervention in its cycle of pathogenesis as early as possible beginning from the avoidance of predisposing/risk factors of the disease. *Ayurveda* has great potential in preventing life style disorders. Measures for prevention of *Madhumeha* (DM) can be classified as: 1. General and 2. Specific Measures

1. General measures are: to follow *Dinacharya* and *Ritucharya* properly, self control and knowledge of various factors affecting health, good habits, avoiding factors responsible for generating *Ama* (improperly digested/metabolized substances, avoiding food in excess quantity, avoiding *Diwa Swapna* (Sleeping in day time), doing regular exercise etc.

2. Specific measures include avoiding specific etiological factors such as diet provoking *Kapha*, *Guru*, *Snigdha*, *Nava Anna*, *Nava Madya*, *Ati Ashana* etc. The role of *Ayurveda* extends at different levels of prevention i.e. primordial, primary, secondary and tertiary.

Role of Ayurveda in primordial prevention of Diabetes Mellitus

Primordial prevention is the prevention of the emergence or development of risk factors in countries or population groups in which they have not yet appeared. This is the true primitive prevention in lifestyle diseases like DM and it is achieved through individual and mass education of regular exercise (*Vyayam*) till the appearance of features of *Balardh Vyayam* (exercise upto half strength) as a part of *Dincharya* (daily regime). Initial treatment of patients with type 2 diabetes mellitus includes education, with emphasis on lifestyle changes including diet, exercise and weight reduction. Use of proper dietary habits as per *Ashtvidh Ahar visheshayatan* and *Dwadash Ashan Vichar* (eight and twelve rules for taking diet) very beginning of life i.e. childhood is again a strong measure in preventing risk factors of DM from emerging in

adulthood because *Ayurveda* advocates sedentary lifestyle (*Asyasukham*) and high calorie diet (*Guda Vaikritam*) as important causative factors for *Madhumeha*.

Role of Ayurveda in primary prevention of Diabetes Mellitus

Primary prevention is action taken prior to the onset of disease which removes possibility that a disease will ever occur. High risk people are identified and they are advised socio-economic, behavioral and lifestyle changes. These include modifying lifestyle as per guidelines of *Ayurvedic* classical texts such as *Sadvritta* (good lifestyle practices), non suppression of natural urges, *Nidana Parivarjana* (avoiding causative factors) and so on after recognizing *Purvaroopas* (premonitory signs) of *Madhumeha*.

According to *Sushruta Samhita*, the food enriched with alcohol, excessive milk, oil, ghee, flour, and meat of the animals which live in water or near water should be avoided because they can precipitate the disease *prameha*.¹⁶

The patient suffering from *prameha* should be given the following food as mentioned in *Charaka Samhita*:

i) *Manthas* (flour of different types of corn mixed with water), *kashayas* (decoctions), barley powder, linctuses prepared of barley and other light eatables

ii) *Yavaudana* (cooked barley) without adding any unctuous articles, *vatya* (barley porridge), *saktu* (roasted corn flour) and *apupa* (pancakes).

iii) Old *shali dhanya* (rice variety) cooked and mixed with the soup of

mudga (pulse variety) etc. and preparations of bitter vegetables.

iv) Cooked *shastika* rice and *trina dhanyas* mixed with the oil of *Danti*, *Ingudi*, *Atasi* and *Sarshapa* (mustard).¹⁷

The *Mamsa* (flesh) of *viskira*, *pratuda* and *jamgala* animals and birds are also recommended. Barley should constitute principal ingredient of food of the patient suffering from *prameha*. A *kaphaja pramehi* should take eatables prepared of barley mixed with honey.¹⁸

Role of Ayurveda in secondary prevention of Diabetes Mellitus

Secondary prevention involves measures which are taken to halt the progress of a disease at its incipient

stage and prevent complication. Use of anti diabetic herbs and formulations are advised in this phase. In *Madhumeha*, drugs having *rasayana*, *balya* and *jivaniya* action as well as *pramehaghna* properties like *Amalki*, *Guduchi*, *Pippali*, *Haridra* etc. have been found effective and these are being used as adjuvant to known globally proven hypoglycemic agents also *Nyagrodhadi Churna*.¹⁹ Such measures which reduce *meda* and *kapha*, for example heavy exercise, *ruksha udavartana*, *ratri jagarana* etc. are beneficial for patients of *prameha*.²⁰

Certain preparations mentioned for *prameha /madhumeha* in different Ayurvedic texts^{21, 22, 23, 24, 25}

Table 2: Formulations Used in Prameha /Madhumeha

SI No	Types of Formulations	Names of Formulations
1.	<i>Svarasa</i>	<i>Amrita, Dhatri Satavari</i>
2.	<i>Kvatha</i>	<i>Phalatrikadi Kvatha</i> <i>Vidangadi Kvatha</i>
3.	<i>Curna</i>	<i>Eladi Churna Karkatibijadi Churna .</i>
4.	<i>Kalka</i>	<i>Triphala Kalka</i>
5.	<i>Gutika (Vati)</i>	<i>Candraprabha Vati Candrakala Gutika</i>
6.	<i>Guggulu Preparations</i>	<i>Goksuradi Guggulu</i>
7.	<i>Modaka</i>	<i>Trikatukadya Modaka</i>
8.	<i>Asava</i>	<i>Lodhrasava Sarivadyasava</i>
9.	<i>Arishta</i>	<i>Deodarvyadyarishta</i>
10.	<i>Ghrita</i>	<i>Dhanvantara Ghrita Dadimadya Ghrita</i>
11.	<i>Taila</i>	<i>Haridradi Tail</i>
12.	<i>Paka</i>	<i>Puga Paka ,Asvagandha Paka</i>
13.	<i>Rasa Aushadhi</i>	<i>Basanta Kusumakara Rasa Brhat Vangesvara Rasa, Svarna Vanga, Prameha Cintamani Rasa</i>
14.	<i>Others</i>	<i>Guduchyadi Yoga, Bhudatryadi Yoga, Nisha Triphala Yoga Silajita</i>

Role of Ayurveda in Tertiary prevention of Diabetes Mellitus

It includes all measures that reduce or limit impairments and disabilities and minimize suffering of the patient due to disease. *Ayurveda* has limited role at this stage but use of

certain *Rasayana* drugs *Amrita*, *Amalaki* etc along with strict control of blood sugar help to reduce complications.

CONCLUSION

Ayurveda advocates healthy balanced living that views each person as an individual, with a unique mind-

body constitution and set of life circumstances. Type 2 diabetes mellitus is increasingly common, primarily because of increases in the prevalence of a sedentary lifestyle and obesity. With appropriate use of *Ayurvedic* preventive measures such as *Dincharya*, *Ritucharya*, *Ahar vidhi* and therapeutic measures *Madhumeha* (DM) can be prevented at all levels and longevity can be increased.

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CORRESPONDING AUTHOR

Dr. Ramesh Kant Dubey
Lecturer of Swastha vritta,
Govt. Ayurvedic College and Hospital
Atarra (Banda) UP, India
Email: rameshdubey01@gmail.com

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