

A SURVEY STUDY OF DIETARY FACTORS MENTIONED IN AYURVEDA WITH SPECIAL REFERENCE TO DIAGNOSED DIABETES MELLITUS (Type II) PATIENTS

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ABSTRACT

Introduction- Diabetes mellitus (Type II) is a life style disorder and dietary factors directly contribute to its causation initially and prognosis and management later on. *Ayurveda* also mentions *madhumeha* as a result of inappropriate diet and sedentary lifestyle. Lot of dietary factors described in *Ayurveda* as causative factors of *madhumeha* are in trend in one or the other way. **Objectives-** To study the role of dietary factors mentioned in *Ayurveda* texts in diagnosed patients of diabetes mellitus (type II). **Materials and method-** 300 diagnosed patients of diabetes mellitus (type II) were interviewed via a

designed questionnaire followed by analysis. **Result-** Maximum patients were using *dadhi* (curd) i.e. 81.33%; followed by *snigdhadravya* (oil and fat rich food) i.e. 63.33%; *madhura dravya* (highly sweetened products) i.e. 58.66% and *guru dravya* (highly nutritious food and heavy to digest) 54%.

KEYWORDS: Ayurveda, madhumeha, diabetes mellitus, dietary habits.

1. INTRODUCTION

Diabetes mellitus is a growing health hazard in developing countries. Being a psychosomatic disease and due to most dangerous complications, diabetes mellitus (type II) has grabbed the attention of health community all over the world. Non communicable diseases like diabetes mellitus have already overtaken communicable diseases in terms of mortality and morbidity.

In spite of fascinating advances in pharmaco-therapeutic agents, world is seeking for safer and effective remedies. Increased side effects, lack of effective treatment for complications, high cost of new drugs and resistance to the drugs are some reasons for renewed public interest in alternative medicines. *Ayurveda* does not merely talks about the treatment but it emphasizes on diet and lifestyle basically. Diet constitutes a crucial aspect of the overall management of diabetes, which may involve diet alone, diet with oral hypoglycemic drugs, or diet with insulin.

In classical texts of *Ayurveda*, a specific condition namely *madhumeha* has been mentioned under the types of *vaticaprimeha*^[1] which has been said to be bad in prognosis. The term *madhumeha* means “honey like urine”^[2] indicating it to be sweet or having presence of sugar in it. So the symptoms of *madhumeha* correlate with the present day diabetes mellitus. *Primeha* is described as “*prabhutavilmutrata*”^[3] which means passing of copious and turbid urine frequently. The chief *nidana* (etiological factor) of *Primeha* has been mentioned specially as *asyasukham* (sedentary life), *swapnasukham* (enjoying excessive sleep), *payahsevana* (excessive use of milk products), *audakamamsa atisevana* (excessive use of non-vegetarian food) etc. So, *Primeha* can be considered as lifestyle disorder in mentioned in *Ayurveda*.

2. ETIOLOGICAL FACTORS OF PRIMEHA

Sahaja^[4] (Hereditary)- In some cases of *primeha*, heredity has been mentioned to play a role due to *bijadosha* (genetic defect). This kind is incurable as per *Ayurveda*.^[5]

Apathya Nimittaja (Acquired due to life style)^[6]

This type seems to be acquired one. Alteration in diet and lifestyle is the underlying cause. The alteration in diet means use of *dadhi* (curd), *navannapana* (fresh grains harvested from fields), *kaphavardhakaahara* (junk food), *guru dravya* (substances which are not easily digestible but are nutritious in nature) etc. in excess amount and for long times.^[7]

So by *nidana* (cause) and *purvrupa* (pre symptoms), *madhumeha* can be co- related with Diabetes mellitus. And in modern science Diabetes mellitus (type II) is a group of metabolic disorders due to impaired lifestyle, in which there is high blood sugar level over a prolonged period including frequent urination, increased thirst, and increased hunger.

The general nidana (causes) according to Acharya Charka and Acharya Sushruta are listed in Table No. 1.

Table No. 1: General nidana (DIETARY FACTORS) of Prameha as described in classics.

Nidana(Causes)	Ch. ^[8]	Su. ^[9]	Present day food
Ati dadhi sevena	+	-	Curd
Medavardhak dravya atisevana	-	+	Deep Fried food and refined flour
Gramya, Anupa, Audaka Mamsa Atisevana	+	-	Meat and its items
Payaha Sevana	+	-	Milk and milk products
Navapana	+	-	Alcohol
Navanna	+	-	Fresh grains harvested from fields
Guda Vikara	+	-	Jiggery and its items
Kaphavardhaka Ahara	+	-	Processed, precooked and Junk food
Sheeta Dravya	-	+	Deep frozen and preserved food items
Madhura Dravya	-	+	Highly sweetened products
Amla, Lavana Rasa	+	-	Highly sour any salty products
Snigdha Dravya	-	+	Oil and fat intake in excess
Drava Annapana	-	+	Excessive liquid intake
Guru Dravya	-	-	Highly nutritious food
Picchila Dravya	-	-	Slimy food substances (noodles, pasta, pizza)
Ushna, Katu Rasa Sevana	+	-	Acidic and Spicy Foods

The *panchabhautika* composition, *rasa* and the predictable type of effect the articles can produce in the body has been evaluated and shown in Table No. 2.

Table No. 2: Properties of dietary articles that cause Prameha.

Gunayukta Ahara (properties of food)	Mahabhoota (Penta elemental constitution)	Rasa	Dusti(vitiation)
Guru(heavy)	Prithv(earth), Aap(water)	Madhura (sweet) rasa	Kapha, Medas
Snigdha(unctuous)	Prithvi, Aap	Madhura,Lavana(saline) Rasa	Kleda, Kapha
Drava (liquid)	Aap	Madhura rasa	Kapha and Kleda
Picchila(slimy)	Prithvi, Aap	Madhura rasa	Kapha and Kleda(body fluid)
Sheeta(cold)	Aap	Tikta(Bitter), Madhura, Kashaya Rasa(astringent)	Udaka(water), Kapha and Vata
Manda(dull)	Prithvi, Aap	Madhura, Tikta, Kashaya Rasa	Kapha
Sthira(stable)	Prithvi, Aap	Madhura, Tikta Rasa	Kapha
Sara(mobile)	Aap	Madhura, Kashaya Rasa	Mootra(urine)
Mridu(soft)	Prithvi, Aap	Madhura, Tikta, Kashaya Rasa	Kapha
Sandra(solid)	Prithvi, Aap	Madhura, Tikta, Kashaya Rasa	Kapha`

Pathogenesis: These dietary factors of *prameha* are the *hetu* which cause *kapha, meda vridhi*^[10] which ultimately leads to vitiation of these factors and accumulation in *vasti* resulting in excessive formation of urine.

3. AIMS AND OBJECTIVES

To study the role and prevalence of dietary factors mentioned in *Ayurveda* texts in diagnosed patients of diabetes mellitus (type II).

4. MATERIALS AND METHODS

Review of *Ayurveda* classics including relevant commentaries and modern literature including print media, online information and journals was done followed by analysis. A questionnaire was developed related to dietary habits mentioned in classical texts and used contemporarily as well. 300 patients (of diagnosed diabetes mellitus with no family history) who were reporting to the Laboratory/ OPD/ IPD of hospital of NIA Jaipur were interviewed with the help of framed questionnaire followed by statistical analysis.

5. OBSERVATIONS AND RESULTS

The survey study revealed that the patients were in the regular habit of consuming milk products, (mainly curd and sweets etc.); deep fried and fat rich diet like *parantha* and *poodi*; junk food like noodles, pizza, burger and pasta, cold drinks, ice creams; spicy food and non-vegetarian food items. Wheat and rice was found to be consumed as staple food. The patients were not found to be in the habit of following dietary ethics also (time and quantity of food intake etc.).

Table No. 3: shows the prevalence of dietary factors in patients who were under the study.

Table No. 3: Prevalence of dietary factors in 300 patients of Diabetes Mellitus.

Sr. No.	General <i>Nidana</i>	No. of patients	%
1.	Dadhi Sevena	244	81.33
2	Snigdha Dravya Atisevana	199	63.33
3	Madhura Dravya Atisevana	176	58.66
4	Guru Dravya Atisevana	162	54
5	GudaVikara Atisevana	150	50
6	Kaphavardhaka Ahara Atisevana	110	36.67
7	Payaha Atisevana	104	34.67
8	Tikta, Katu, Kashaya Rasa Atisevana	103	34.33
9	Ushna Katu Rasa Atisevana	100	33.33
10	Gramya, Anupa, Audaka Mamsa Atisevana	78	26

6. DISSCUSSION

In this study maximum patients were taking *dadhi (curd)*. *Guru (heavy)* nature of *dadhi* takes longer time for its digestion producing *apakvarasadhatu*, which obstructs *rasavahasrotasa (blocking of channels)* and *abhishayandi*^[10] nature of *dadhi* also causes obstruction in *rasavaha-srotas* which causes *kaphaja* disease. Though *dadhi* is very nutritious, it is said to *kaphamedakrita*^[11] and a chief dietary factor responsible for causation of *prameha*.

A good number of patients were using *kaphavardhaka snigda* and *madhuradravya* (oil and sweet substances). Oil and fat rich food, sweet products has similar properties as *kaphadosha* and excessive use of these types of food leads to *kapha formation and medosamjanana* (fat formation). That's why they got more easily affected by *madhumeha*.

The persons using *gudavikara* were 50%. *Guda* and its products are *kaphavardhaka* in nature and the consumption of *madhura, sthira, guru, and snigdha* rasa in excessive amount causes obstruction of *medovaha srotas* by *apakvaahara* rasa and makes *vikrita medodhatu*. New *jaggery* is *kaphakara* and increases *medodhatu*. Even all the products of *jaggery* are *kaphakara* and are etiological factors of *Prameha*. *Payaha* includes milk and various milk products, which again are *madhura kaphakara*. According to *samanaya-vishesa* principle these increase *kapha* and *meda*. But in modern science the relationship between milk product consumption and type II diabetes has been examined in several meta-analyses. Evidence to date suggests that milk product consumption is associated with a reduced risk of developing type 2 Diabetes.^[13] The point in present questionnaire was related to milk and milk products and the latter are good source of fat and sugar. Another causative factor which is used by patients are *ushna (hot)* and *katu rasa (pungent)* mostly by *pitta dosha* dominated patients.

26% patients were taking *gramya, anupa, audakamamsa* (non-vegetarian food). This includes meat of animal which are domestic or aquatic. Meat is heavy to digest and highly nutritious i.e. *guru, drava, abhishyandi* in nature, this causes *agnimandya* (weakening of digestive fire) too. All the above factors which are *kaphavardhaka* in nature lead to pathogenesis of *prameha*.

7. CONCLUSION

By this survey it is concluded that the dietary articles which are in trend nowadays esp. *curd, fatty substances and junk food* play an important role in producing *diabetes mellitus type II*. This study proves that *Ayurveda* principles which were laid down thousand years back hold

magnitude and significance in present era also. Minor changes in diet and lifestyle can greatly reduce chances of getting this disease.

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