

Lifestyle, Diet and Prediabetes – A Survey StudyShaikh Azra Sharfuddin¹, Yardi Ashutosh Bhaskar², Shaha Reshma .R³¹M.D. Scholar Dept. Rog Nidan Vikriti Vidnyan, Siddhakala Ayurved Mahavidyalaya, Sangamner, Dist- Ahemadnagar.²H.O.D. & Guide Dept. Rog Nidan Vikriti Vidnyan, Siddhakala Ayurved Mahavidyalaya, Sangamner, Dist- Ahemadnagar.³Reader Dept. Rog Nidan Vikriti Vidnyan, Siddhakala Ayurved Mahavidyalaya, Sangamner, Dist- Ahemadnagar.**Corresponding Author:** Shaikh Azra Sharfuddin ,M.D. Scholar Dept. Rog Nidan Vikriti Vidnyan, Siddhakala Ayurved Mahavidyalaya, Sangamner, Dist- Ahemadnagar.**E-mail Id:** shaikhazra1@gmail.com**Conflicts of Interest:** Nil**Abstract**

A condition in which individual are at greater risk of progressing to type 2 DM & have an increased risk of cardiovascular diseases is called as prediabetes, if neglected converted to type 2 DM in long term. The worldwide prevalence of DM has risen over the past 2 decades, from an estimated 30 million cases in 1985 to 382million in 2013. The international diabetes federation projects that 592 million individuals will suffer from diabetes by the year 2035. Depending on the etiology of the DM, factors contributing to hyperglycemia include decreased insulin secretion, decreased glucose utilization and increased glucose production. DM is the leading cause of end stage renal disease, non traumatic lower extremity amputations, adult blindness and predisposing factor to cardiovascular diseases. With increasing incidents worldwide, DM will be leading cause of morbidity & mortality in future. As stated in our classics sedentary lifestyle, frequent intake of some dietary products like curds, soup of flesh of domestic, aquatic and marshy land animals, milk preparations, freshly harvested foodgrains, freshly prepared alcoholic drinks, jaggery and its products are the causative factors of Prameha. In due course of time all types of Prameha even after proper or improper treatment gets converted to Madhumeha. Since these factors are responsible for manifestation of Poorvaroop of Madhumeha (prediabetic symptoms) a survey based study has been conducted.

Keywords: Madhumeha, Diet, Prediabetes, Type 2 DM**Introduction**

Type 2 DM does not have a discrete physiologic event which defines diagnosis; rather its at one end of a continuous glucose control spectrum with normal glucose control at the other. In-between these two boundaries exists a region of abnormal glucose that does not yet reach the criteria for T2DM^[1] is called Prediabetes (a stage in which individuals are at greater risk of progressing to T2DM & have an increased risk of cardiovascular diseases)^[2]. Those diagnosed with T2DM typically spend an extended period in this region of impaired glucose regulation, sometimes for more than a decade, before progressing to T2DM^[3] which is strikingly resemble with the poorvaroop of madhumeha (a stage in which polydipsia, Burning sensation in the palm and sole, numbness in palm and sole, Lassitude, etc. are predominant)^[4]. The

Diabetes Prevention Program (DPP) demonstrated that intensive changes in lifestyle (diet and exercise for 30 min/d five times/week) in individuals with IGT prevented or delayed the development of T2DM when implemented in the stage of prediabetes^[5] were already inscribed by our classics with the pact^[6] which implies looking after our body by means of Pathyapalana (Maintenance of proper diet and lifestyle without much more addiction to the pleasure of some diets viz., Curds, soup of the flesh of domestic, aquatic and marshy land animals, milk preparations, freshly harvested food particles, freshly prepared alcoholic drinks, preparations of jaggery) which is the only way of preventing our body from the encroachment of the most devastating metabolic disorder, T2DM.

Aims & Objectives

To assess the lifestyle and diet consumed in excessive quantity responsible for Prediabetic condition.

Materials & Methods

A total 25 no. of patients attending OPD of Siddhakala Ayurveda Mahavidyalaya & Hospital, Sangamner were selected irrespective of their sex, caste etc. taking into consideration the inclusion and exclusion criteria and observation would be made taking into consideration the etiological factors as said in ayurvedic texts as follows

- Luxurious lifestyle
- Excessive sleep
- No exercise
- Excessive intake of curd
- Intake of domestic animals flesh
- Intake of aquatic creatures flesh
- Intake of marshy land animals flesh
- Intake of freshly harvested grains
- Intake of jaggery/sugar and its products

Selection Criteria

Inclusion Criteria

- 1) Poorvaroop of Madhumeha (Prediabetes)
 - a. Pipasa (Thirst)
 - b. Karapada Daha (Burning sensation in palm and sole)
 - c. Karapada Supata (numbness in palm and sole)
 - d. Alasya (Lassitude)
- 2) Biochemical Estimation of Prediabetes^[7]
 - a. IFG - 100 – 125 mg/dl
 - b. IGT - 140 – 199 mg/dl
 - c. HbA1c - 5.7 – 6.4 mg/dl

Exclusion criteria

- a. Pregnant ladies.
- b. Retinopathy.

- c. Renal failure
- d. Peripheral neuropathy.
- e. Autonomic neuropathy.
- f. Infraction/ MI (Myocardial Infarction).
- g. TIAs (Transient Ischaemic Attacks)
- **Laboratory investigation:**^[8]

Impaired fasting glucose (IFG), Impaired glucose tolerance (IGT) & HbA1C (Glycosylated Haemoglobin) have been adopted by WHO as the standard diagnostic criteria for Prediabetes.

Observation and Results

Sr. No	Luxurious Lifestyle	Sleep	Exercise	Curd	Domestic Animal flesh	Aquatic Creatures flesh	Marshy Land Animal flesh	New Food grains	Jaggery / sugar & products
1	+	-	-	+	+	+	+	+	+
2	+	+	-	+	+	+	+	+	+
3	+	+	-	+	-	+	-	+	+
4	-	+	-	+	-	-	-	-	+
5	+	-	-	-	-	+	-	-	-
6	+	+	+	-	+	+	-	-	+
7	+	-	+	+	+	+	+	-	+
8	+	-	-	+	-	+	+	+	+
9	+	+	-	+	-	-	+	+	-
100	+	+	-	+	-	-	-	-	+
11	-	+	-	-	-	-	-	-	+
12	-	-	-	-	+	-	+	+	-
13	+	+	-	-	+	+	+	+	+
14	+	+	+	+	+	+	-	+	+
15	+	+	+	+	+	+	-	-	+
16	+	-	-	+	-	+	+	-	-
17	-	-	-	+	-	-	+	-	+
18	-	+	-	+	-	-	+	-	+
19	+	-	+	+	-	+	-	-	+
20	+	-	+	-	+	+	-	+	+
21	+	+		-	+	+	+	+	+
22	+	-	-	+	+	-	+	-	+

23	-	-	+	+	+	-	+	-	+
24	+	+	+	+	+	+	-	-	-
25	+	+	-	+	-	-	-	+	+

Result

In the study following result is seen for etiological factors

- Luxurious lifestyle – 76% of the patients
- Excessive sleep – 56% of the patients
- No exercise – 68% of the patients
- Excessive intake of curd – 72% of the patients
- Intake of domestic animals flesh – 52% of the patients
- Intake of aquatic creatures flesh - 60% of the patients
- Intake of marshy land animals flesh – 52% of the patients
- Intake of freshly harvested grains – 44% of the patients
- Intake of jaggery/sugar and its products – 80% of the patients

Discussion

In the study patients fulfilling the selection criteria were observed for the etiological factors.

It is observed that history of luxurious life style is 76%, excessive sleep is 56%, no exercise is 68%, intake of curd is 72%, intake of flesh of domestic animals is 52%, intake of aquatic creatures flesh is 60%, intake of marshy land animals is 52%, intake of freshly harvested grains is 44%, intake of jaggery/sugar and its products is 80% of the patients. In comparison to this those patients who didn't have the history of the above factors is less. So the above mentioned factors can be considered as the lifestyle and diet type of etiological factors for Prediabetes. It is evident from the survey that individuals addicted to the pleasure luxurious life style, excessive sleep, no exercise, intake of Curd, soup of the flesh of domestic, aquatic or marshy land animals, Fresh grains and water, preparations of Jaggery / Sugar/its products like sweets were encroached by the devastating prediabetes.

Conclusion

Unhealthy lifestyle, diet and Prediabetes are inextricably linked, with the former being the primary causal agent of the latter. Unhealthy lifestyle practices attributable to modern industrialized environments have been shown to account for most of the cases of Prediabetes. Observational survey has suggested that overall dietary patterns and lifestyle related changes are one of the important considerations. For example, sedentary lifestyle, no exercise, addiction to the pleasure of some diets viz., Curds, soup of the flesh of domestic, aquatic and marshy land animals, milk preparations, freshly harvested foodgrains, freshly prepared alcoholic drinks, preparations of jaggery/sugar and its products are responsible for the manifestation of Prediabetes (Poorvaroopa of Madhumeha). On the other hand those consuming a prudent diet (intake of cereals, vegetables, legumes, low-fat dairy products, nuts, seeds, less sugar) have a lower risk of Prediabetes.

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