



Case Report

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Ayurvedic Management of Diabetes Mellitus Type-II: A Case Study

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ABSTRACT

Diabetes mellitus is a major health pandemic effecting mankind since ancient times. It is a well-known multifactorial metabolic disorder characterized by abnormally high blood glucose levels due to absolute or relative lack of insulin. The incidence of Diabetes has increased drastically in the recent times because of sedentary lifestyle and unhealthy dietary habits, which happens to be the main etiological factors for this disease. Latest IDF data shows that currently 72.9 million people are living with diabetes in India. In ancient Ayurvedic texts this disease is described as Madhumeha, a form of Vataja Prameha, characterized by passing of excessive amount of sweet urine. The present case study is of a 51 years old male patient visiting Ayurvedic Clinic, Delhi with the chief complaints of body ache, sweet taste of mouth, burning sensation at sole, excessive hunger, excessive thirst, excessive mental stress and increased frequency of micturition. On the basis of physical findings and investigations the diagnosis of Madhumeha (Diabetes mellitus, type-2) was made. The treatment plan opted was use of Sanshamana aushadhi along with modification of diet and lifestyle. Regular follow up visits at the interval of seven days were done for a period of 1 month. After 1 month of treatment significant responses was observed.

Keywords: Madhumeha, Diabetes mellitus, Lifestyle, Diet, Aushadh.

INTRODUCTION

Ancient Indian physicians identified Diabetes mellitus as *Madhumeha* because the urine of patients attracted ants. *Madhumeha* is a *Vataja* sub-type of the disease *Prameha*. This malady, identified as *mahagada* in *Ayurveda*^[1] is troubling mankind since ancient age and the evidence of this disease with its complications is increasing day by day. It is a syndrome, which includes clinical conditions involved in obesity, prediabetes, diabetes and metabolic syndrome^[2]. *Ayurvedic* texts mention the cardinal symptom of disease *Prameha* as "*prabhootavila mutrata*" i.e. excretion of large quantities of turbid urine^[3], which is akin to the symptom of Diabetes mellitus mentioned in modern texts. Epidemiological studies show the global prevalence of diabetes among adults is increasing and about 424.9 million people had diabetes in 2017^[4]. India is no exception to this global trend and currently has 2nd highest number of diabetics of any one country in the entire world^[5]. Diabetes mellitus is a group of metabolic diseases characterized by chronic hyperglycaemia resulting from abnormalities in insulin secretion, insulin action or both. This hyperglycaemia (high blood sugar) produces the symptoms of frequent urination (polyuria), increased thirst (polydipsia), and increased hunger (polyphagia). If left untreated, Diabetes mellitus can lead to many complications like diabetic ketoacidosis, non-ketotic hyperosmolar coma, heart disease, stroke, kidney failure (nephropathy), foot ulcers, retinopathy, cataracts and glaucoma^[6].

Prameha is a *Santarpanajanya tridoshaja vyadhi*. According to *Sushruta*, excessive indulgence in *pramehotpadaka aahara-vihara*, leads to vitiation of *aparipakva vata, pitta, kapha*, which combines with *medodhatu*. These vitiated *dosha* and *dhatu* proceed downward through the *mutravaha srotas* to get localized at *basti*, causing *Prameha*^[7]. *Ayurveda* states that *Madhumeha (Vataja Prameha)* is *asadhya* i.e. incurable, however it can be managed with treatment. *Ayurvedic* management includes *Shamana chikitsa* (intake of anti-diabetic drugs), *Shodhana chikitsa (panchakarma therapy)* and *Pathya aahara vihara* (dietary modification and lifestyle changes).

CASE REPORT

A 51 year old, married, Hindu male patient visited Ayurvedic Herbal Healthcare Clinic in Delhi on 4th September 2013, with the chief complains of *sarvangavedana* (body ache), *madhuryamasyata* (Sweet taste of mouth), *karapadadaha* (Burning sensation at sole), *pipasadhikya* (polydipsia), *mootraadhikya* (polyurea) for more than 2 to 3 month, and other associated complains were *kshudha vridhhi* (excessive hunger),

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atichinta (excessive mental stress), and *nidraviddhi* (excessive sleepiness) for last 1 month.

Personal history revealed that the patient is lacto-vegetarian but used to take extra oily and fatty diet, with a habit of intake of junk food and diurnal sleep. Frequency of micturition is 8-9 times during day and 4-5 times at night, bowel habits are irregular with mild constipation (once/1-2 days, hard stool) and the patient has no addictions. Past history revealed that patient was suffering from type 2 Diabetes mellitus for one year. He was on metformin but was very irregular in taking medicines and routine check-up of blood sugar levels. Family history revealed that his mother is diabetic.

The General examinations of the patient revealed dryness of tongue, as for vitals, pulse rate was 84/min, respiratory rate of 18/min and blood pressure of 120/80 mm of Hg. His body weight was 82 kg, height 175 cm and BMI of 26.8 Kg/m².

His Respiratory system examination, Gastro-intestinal examination, Cardiovascular examination, Central Nervous System Examination and Locomotor examination did not uncover any abnormality. His blood investigations on 2nd September 2013 showed Fasting Blood sugar level as 276 mg/dl (70-110 mg/dl Normal), Post prandial Blood Sugar level as 294 mg/dl (70-140 mg/dl Normal) and Glycosylated haemoglobin (HbA_{1c}) as 8.4% (4-6% Normal). Based on this presentation, the patient was diagnosed as a case of *Madhumeha* (Diabetes mellitus type-2).

An allopathic doctor had advised him to take Injection Humalog 25/75 (Insulin Lispro) 16 units before breakfast and 8 units before dinner for the above complaints and investigations results, but instead he wanted to try *Ayurvedic* medications and visited this clinic on 3rd Sept 2013 for the first time.

Treatment Plan:

The following oral medicines were administered for 20 days:

- A combination of *Vasant Kusumakar Rasa* (100 mg), *Trivanga bhasma* (125 mg), and *Giloy satva* (500 mg) with honey twice a day before meal.
- *Madhunashani Vati* (1 tab) four times a day with lukewarm water before meal.
- *Madhukalpa Vati* (2 tab) and *Chandraprabha Vati* (2 tab) twice a day with lukewarm water administered after meal.

After 20 days the following treatment schedule was followed:

- *Madhunashani Vati* (2 tab) three times a day with lukewarm water before meal.
- *Madhukalpa Vati* (2 tab) and *Chandraprabha Vati* (2 tab) twice a day with lukewarm water administered after meal.

Along with the above medications patient was advised to take *Amla* juice (20ml) with *Haridra churna* (1g) in the morning, daily outdoor walk for 1 hour and avoidance of *divaswapna* i.e. sleeping during day.

On the first follow up (after 7 days of the treatment) patient reported reduction in previous mentioned symptoms. Mild to moderate

improvement was noted in body ache, sleep, thirst, hunger and the frequency of micturition was reduced. On the second follow up (14th day) patient had much improvement in above symptoms. On third follow up (21st day) patient felt lightness and energetic in routine activity, mental stress and burning in feet was also reduced. On the fourth follow up (28th day) after changing the medications any of the above mentioned symptoms did not reappear, he felt energetic and frequency of urine was 0-1 times during night and 4-6 times during day.

Table 1: shows the improvement in blood sugar levels of the patient.

Follow Up	Fasting blood Sugar	Post prandial blood Sugar
Baseline (0 Day) [2.09.2013]	176 mg/dl	294 mg/dl
Follow up-1 (7 th Day) [11.09.2013]	110 mg/dl	145 mg/dl
Follow up-2 (14 th Day) [18.09.2013]	97 mg/dl	110 mg/dl
Follow up-3 (21 th Day) [25.09.2013]	88 mg/dl	105 mg/dl
Follow up-4 (28 th Day) [1.10.2013]	95 mg/dl	117 mg/dl

On 2nd Sep 2013 patient's Serum Creatinine was 0.9 mg/dl, S. Cholesterol was 159 mg/dl, S. Triglycerides were 191 mg/dl, VLDL was 15 mg/dl, HDL was 26 mg/dl, SGOT(AST) was 115 U/L and SGPT(ALT) was 200 U/L. On 18th Sep 2013 (after taking medicines) his total bilirubin was 0.8 mg/dl, total proteins were 7.0 g/dl, alkaline phosphatase was 218.7 IU/L and SGOT, SGPT improved to 57 U/L and 66 U/L respectively.

Improvement in subjective symptoms and signs along with reduction in Fasting Blood sugar levels, Post prandial Blood sugar levels, SGOT and SGPT levels.

DISCUSSION

Madhumeha is *Vata-Kapha pradhan tridoshaja vyadhi*. *Sahaja* (type-1) and *Apathyanimittja* (type-2) are types of *Madhumeha*. Other types explained in various classical texts like *Krishna*, *Dhatukshayajanya* and *Apatarpanjanya* can be correlated with *Sahaja Madhumeha* while *Sthula*, *Avaranjanya* and *Santarpanjanya* can be correlated with *Apathyanimittaja Madhumeha*. This patient was having *apathyanimittaja Madhumeha*, so the drugs acting upon main component of pathology like *meda dhatu*, *kleda*, *kapha*, *meda dhatvagni* and having *deepana*, *pachana*, *lekhana*, *vata-kaphahara*, and *medohara* properties are essential for treatment.

Yogaratanakar has mentioned *Vasant Kusumakar Rasa* in *Prameha Chikitsa Adhyaya*⁸. It is a potent anti-diabetic drug⁹ which possibly acts due to the combined effects of each of the ingredients of drug. It pacifies *tridosha* i.e. *vata*, *pitta* and *kapha* as it contains *Praval Pishti*, *Ras Sindoor*, *Mukta Pishti*, *Abhrak Bhasma*, *Swarna Bhasma*, *Rajat Bhasma*, *Loha Bhasma*, *Naga Bhasma*, *Vanga Bhasma*, *Vasa*, *Haldi*, *Ikshu*, *Kadali*, *Kamal*, *Chameli*, *Shatavari* and *Chandan*. *Trivanga bhasma* is an *Ayurvedic* formulation prepared from Lead, Zinc and Tin. It is also a potent antidiabetic as mention in classical texts and proved by various research works^[10,11]. *Guduchi* again is an anti-diabetic or hypoglycaemic drug^[12-15]. Hence, the combination of *Vasant kusumakar rasa*, *Trivanga bhasma* and *Giloy satva* effectively reduced the blood sugar levels.

Madhunashani Vati has *Guduchi, Jambu, Katuki, Nimba, Kirata Tiktakta, Gudamara, Karavellaka, Kutaja, Go-kshura, Karcura, Haridra, Kalamegha, Babbula, Krishna Jiraka, Ativisha, Ashvagandha, Bilva, Triphala, Vata, Shilajatu* and *Methika*. *Madhukalpa vati* contains *Karela, Kutki, Chiraita, Neem, Methi, Jamun, Ashvagandha, Atis, Shilajeet* and *Chandraprabha vati* contains *Giloy, Peepalamool, Dhaniya, Bahera, Chavya, Atees, Yavkkshar, Nishoth, Dantimoola, Tejpaat, Dalchini, Badielaichi, Vanshlochan, Sugar, Shuddh Guggulu, Shuddh Shilajeet, Nagarmotha, Kapoor kachri, Devdaru, Chitrakamool, Harar, Amla, Vayavidanga, Choti Peepal, Kali mirch, Gaj-peepal, Sonth, Kala namak, Sendha namak, Sambhar namak, Laghu elabeej, Kababcheeni, Gokhrudana, Shwet Chandan, Chirayata, Haldi, Swarna makshika Bhasm, Sajjichar, Daruhaldi, Vach, and Lauh Bhasma*. All the above mentioned ingredients possess anti-diabetic and hypoglycaemic activity, so they are effective in the management of Diabetes mellitus.

CONCLUSION

Madhumeha is a multifactorial silent killer which needs to be treated as early as possible to avoid complications. From the above data it can be concluded that *Ayurvedic* management of *Madhumeha* can be achieved by proper use of *Shamana aushadha* and following proper dietary habits and lifestyle changes. In this case *Shamana aushadhis* have given excellent results and within one week of starting the treatment, raised blood sugar levels dropped to pre diabetic range while after 14 days, the sugar levels were in normal range. Further study can be carried out on a large population to validate the treatment plan.

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